

Drinking Water Surveillance Program

**ELMIRA
WELL SUPPLY**

Annual Report 1989



**Environment
Environnement**

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ELMIRA WELL SUPPLY

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1989

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FIBS 1367

DRINKING WATER SURVEILLANCE PROGRAM

EXECUTIVE SUMMARY

ELMIRA WELL SUPPLY ANNUAL REPORT 1989

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, there were 65 plants being monitored.

The Elmira Well Supply source consists of multiple aquifers each supplying a network of wells. Two aquifers were sampled on the DWSP. The north aquifer was sampled at well E5A and the south aquifer at well E9. The design capacity for the Elmira Well Supply is 21.4 x 1000 m³/day. The Elmira Well Supply serves a population of approximately 7100.

Water samples were taken of the raw and treated water from each well and from one house in the distribution system. The Elmira Well Supply was sampled for the presence of approximately 180 parameters monthly. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organic (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polyaromatic Hydrocarbons, Specific Pesticides and Volatiles). Samples were analyzed for Chlorophenols and Specific Pesticides in June and November only.

A summary of results is shown in Table A.

All Inorganic and Physical parameters were below any applicable health related guidelines.

Samples were analyzed monthly for the presence of approximately 110 Organics. Levels did not exceed health related guidelines.

During 1989, the DWSP sampling results indicated that the Elmira Well Supply System produced acceptable quality water. N-nitrosodimethylamine was detected above guideline levels in some source water wells.

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE BY SCAN (1988)

SCAN	S AQWIFER RAW			S AQWIFER TREATED			SITE 1			N AQWIFER RAW			N AQWIFER TREATED		
	TESTS	POSITIVE	XPOSITIVE	TESTS	POSITIVE	XPOSITIVE	TESTS	POSITIVE	XPOSITIVE	TESTS	POSITIVE	XPOSITIVE	TESTS	POSITIVE	XPOSITIVE
BACTERIOLOGICAL	27	0	0	30	1	3	33	5	15	36	0	0	33	2	6
CHEMISTRY (FLD)	22	19	86	47	45	95	93	76	81	26	23	88	53	53	100
CHEMISTRY (LAB)	210	146	69	210	145	69	407	322	79	252	191	75	231	170	73
METALS	240	137	57	240	144	60	517	326	63	268	151	52	264	139	52
CHLOROMONATICS	126	0	0	126	0	0	140	0	0	154	0	0	140	0	0
CHLOROPHENOLS	6	0	0	6	0	0	-	-	-	12	0	0	12	0	0
PAH	161	0	0	160	0	0	-	-	-	194	0	0	178	0	0
PESTICIDES & PCB	306	0	0	319	0	0	288	0	0	387	0	0	353	0	0
PHENOLICS	10	8	80	10	2	20	-	-	-	12	2	16	11	2	18
SPECIFIC PESTICIDES	36	0	0	36	0	0	10	0	0	64	0	0	63	0	0
VOLATILES	290	0	0	290	41	14	319	36	11	348	0	0	319	43	13
TOTAL	1434	310		1474	378		1807	765		1773	367		1657	409	

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
 A '-' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

ELMIRA WELL SUPPLY 1989 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, there were 65 plants being monitored.

The DWSP was initiated in Elmira in May, 1988. An Annual report was published for 1988 (ISSN 0843-8382).

This report contains information and results for 1989.

PLANT DESCRIPTION

The Elmira Well Supply consists of many aquifers each supplying a network of wells. Two aquifers were sampled on the DWSP. The north aquifer was sampled at the E5A well and the south aquifer at the E9 well. The only treatment is disinfection. The design capacity for the Elmira Well Supply is $21.37 \times 1000 \text{ m}^3/\text{day}$. The Elmira Well Supply serves a population of approximately 7100.

The site is shown in Figure 1. General information is presented in Table 2.

SAMPLING LOCATIONS

Water samples were obtained from five DWSP approved locations;

- i) North Aquifer Raw - The water originated from the pump suction line prior to chlorination and was sampled through a stainless steel sample line. The sample tap is located in the pumphouse.
- ii) North Aquifer Treated - The water originated from the pump discharge following chlorination and was sampled through a stainless steel sample line. The sample tap is located in the pumphouse.
- iii) South Aquifer Raw - The water originated from the pump discharge and was sampled through a stainless steel sample line. The sample tap is located in the pumphouse.
- iv) South Aquifer Treated - The water originated from the pump discharge following chlorination and was sampled through a stainless steel sample line. The sample tap is located in the pumphouse.
- v) Distribution System - Site 1 - The water at this site may be a mixture of water from any or all sources. The water is sampled through a copper sample line from the basement laundry tap.

SAMPLING AND ANALYSES

Sample lines at the wells were flushed prior to sampling to ensure that the water obtained was indicative of the origin and not residual water standing in the sample line.

Stringent DWSP sampling protocols were followed to ensure that all samples were taken in a uniform manner.

Raw and treated water from the North Aquifer and South Aquifer as well as water from one Site in the distribution system were sampled for the presence of approximately 180 parameters on a monthly basis. Samples were analyzed for Specific Pesticides and Chlorophenols in June and November only. As of August, the analysis of triazine pesticides was dropped from the distribution system. Laboratory analysis was conducted at the Ministry of the Environment facilities in Rexdale, Ontario. Samples were taken in September for analyses by Gas Chromatography/Mass Spectroscopy (GC/MS). This additional analysis is designed to scan for organic contaminants that are not included in the routine monitoring program but which may be present in the water in significant concentrations.

Due to contamination discovered in the South Aquifer, wells pumping water from this aquifer were not used to supply drinking water to Elmira in November or December.

RESULTS

Field measurements were recorded on the day of sampling and were entered onto the DWSP data base as submitted by plant personnel.

Table 3 contains information on the sample day retention time, flow rate and chlorine dosages.

Table 4 is a summary break-down of the number of water samples analyzed by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analyzed in the DWSP.

Associated guidelines and detection limits are supplied on tables 5 and 6. Parameters are listed alphabetically within each scan.

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

ELMIRA WELL SUPPLY SYSTEM

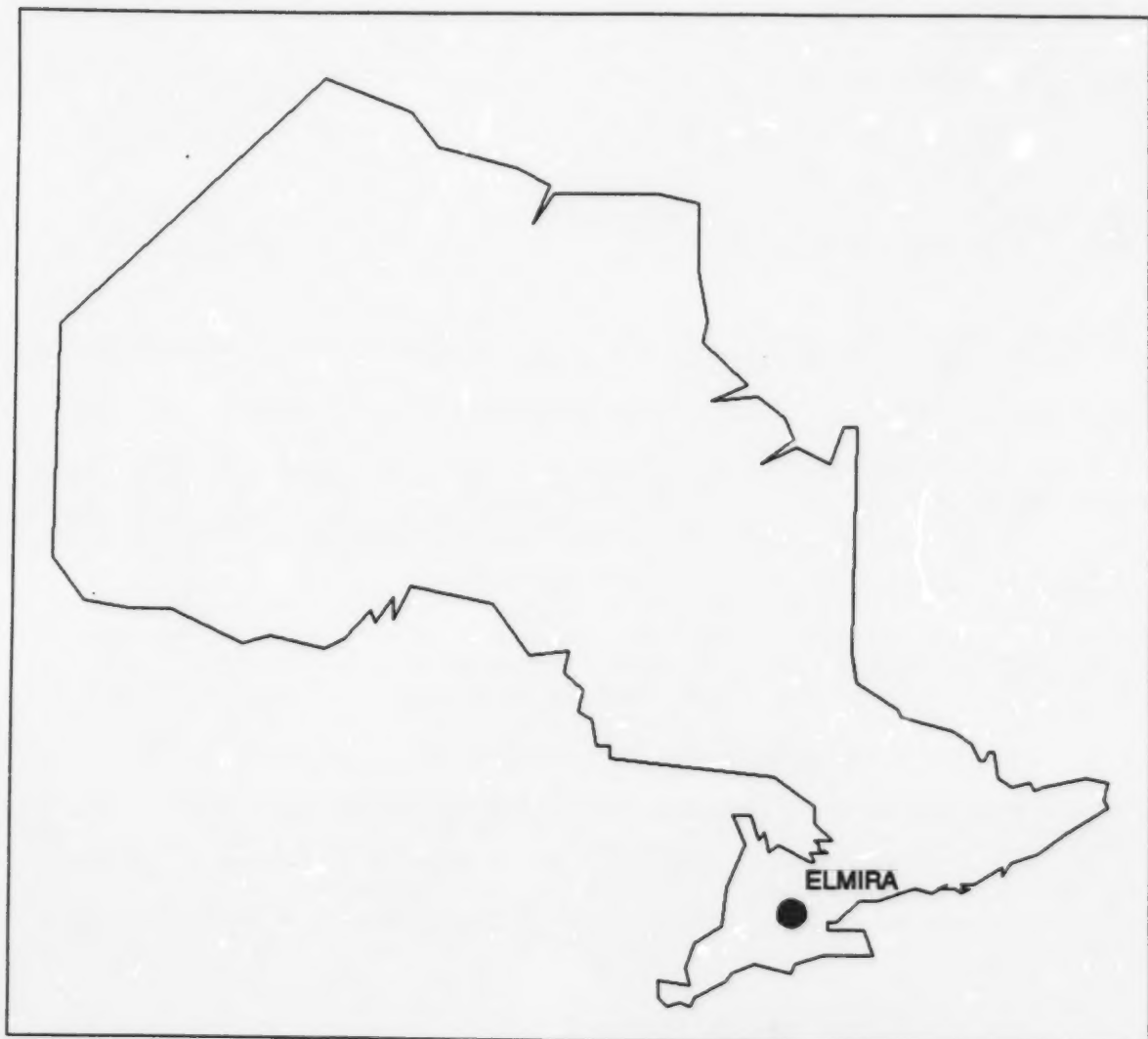


TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

ELMIRA WELL SUPPLY

LOCATION:

REGIONAL MUNICIPALITY OF WATERLOO
C/O MARSLAND CENTER
20 ERB STREET WEST
WATERLOO, ONTARIO
N2J 4G7

SOURCE:

GROUNDWATER

DESIGN CAPACITY:

21.37 X 1000 M³/DAY

OPERATION:

MUNICIPALITY

SYSTEM MANAGER:

R. MACDONALD

MINISTRY REGION:

WEST CENTRAL

DISTRICT OFFICER:

D.R. IRELAND

MUNICIPALITY
SERVED

POPULATION

WOOLWICH TOWNSHIP

7,141

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters. These are currently under review. When an ODWO is not available, guidelines/limits from other agencies are consulted. The Parameter Listing System (PALIS), recently published (ISBN 0-7729-4461-X) by the MOE, catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Many of the compounds detected are naturally occurring or are treatment by-products.

Plant operational personnel address occurrences of taste and odour or biological water quality parameters. The DWSP does not assess these aspects of the water supply.

As stated under Results, traces do not indicate quantifiable results as defined by established MOE laboratory analytical reporting protocols. While they can be useful in trend analysis or confirmation of the presence of a specific contaminant that is repeatedly detected at these levels, the occasional finding of a trace level of a contaminant is not considered to be significant.

DISCUSSION OF GUIDELINES AND LIMITS THEREFORE, IS ONLY CONDUCTED ON POSITIVE RESULTS.

Bacteriology

Positive results for the Bacteriology scan were present twice in treated waters from the North Aquifer, once in treated water from the South Aquifer and five times in the water from Site 1. The positive parameters were Standard Plate Count and Total Coliform Background.

Standard Plate Count is a test used to supplement routine analysis for Coliform bacteria. The limit for Standard Plate Count (indicating some deterioration) in the ODWOs is 500 organisms per mL (based on a geometric mean of 5 or more samples). A high Standard Plate Count was present in the August Site 1 water. While no indicators of unsafe water were detected at this time, the high Standard Plate Count may be indicative of a deterioration in conditions in the distribution system. No samples contained bacteriological results over any applicable health related ODWOs. The August sampling at Site 1 was associated with the highest recorded temperature (17°C) and was the only occasion when there was no chlorine residual recorded.

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological

quality; the routine monitoring program usually requires the taking of multiple samples in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Routine bacteriological monitoring, as outlined in the ODWOs, is carried out by the operating authority.

Inorganic and Physical

Laboratory and Field Chemistry

The results for the Laboratory Chemistry and Field Chemistry scans were below all applicable health related ODWOs.

Turbidity in water is caused by the presence of suspended matter such as clay, silt, colloidal particles, plankton and other microscopic organisms. The most important potential health effect of Turbidity is its interference with disinfection in the treatment plant and the maintenance of a chlorine residual. The ODWO of 1 Formazin Turbidity Unit (FTU) is only applicable to treated water leaving the plant.

There are ODWOs that are set for parameters which are related to aesthetic quality rather than health.

The ODWO indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters, provides an acceptable balance between corrosion and encrustation. Water supplies with a

hardness greater than 200 mg/L are considered poor and would possess a tendency to form scale deposits and result in excessive soap consumption. All sources of water sampled had hardness values ranging from 414 to 515 mg/L as CaCO_3 .

European Economic Community (EEC) guidelines for parameters associated with high hardness values, ie. conductivity and calcium, were exceeded. Conductivity values for both sources ranged from 793 to 982 umho/cm. Calcium levels were reported up to 139 mg/L.

It is desirable that the Temperature of drinking water be less than 15°C. The palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of the treated water may increase in the distribution system due to the warming effect of the soil in late summer and fall and/or as a result of higher temperatures in the source water. The desired ODWO was exceeded twice in the Site 1 water.

The Langelier Index is used extensively in estimating the corrosion potential of water. An increasingly negative index indicates the increasing possibility of corrosion. It is considered sound engineering practice to maintain a slightly positive Langelier Index. The Langelier Index for the Elmira wells is consistently positive.

Metals

The results reported for the Metals scan were below any applicable health related ODWOs.

Elevated levels of Copper, Nickel, Lead and Zinc were detected in the standing samples from the distribution system as compared to the free flow samples. This indicates that these metals were leached from the household plumbing as the water stood overnight. Although the Langelier Index indicates minimal potential for corrosion, some metals will be leached in standing samples in most supplies.

Organic Parameters

Chloroaromatics

The results of the Chloroaromatics scan showed that no Chloroaromatics were detected.

Chlorophenols

The results of the Chlorophenols scan showed that no Chlorophenols were detected.

Pesticides and PCB (Polychlorinated Biphenyl)

The results of the Pesticides and PCB scan showed that no PCBs were detected and that one pesticide was detected:

Alpha BHC

There are several isomers of BHC (benzene hexachloride). Gamma BHC is the active ingredient of the pesticide Lindane while alpha BHC is the isomer most predominantly found in surface waters of the Great Lakes basin as indicated by results from other water supplies on DWSP.

Alpha BHC was detected at a trace level once in the Site 1 water.

Specific Pesticides

Results of the Specific Pesticides scan showed that no Specific Pesticides were detected.

Phenolics

The maximum desirable concentration (MDC) of phenolic substances in drinking water is 2.0 µg/L. This limit has been set primarily to prevent the occurrence of undesirable tastes and odours, particularly in chlorinated water. Phenolic values in the treated water were all below the MDC. Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes.

Polynuclear Aromatic Hydrocarbons (PAH)

The results of the PAH scan showed that no PAHs were detected.

Volatiles

The results of the Volatiles scan showed that five parameters, other than Trihalomethanes (THMs), were detected:

Toluene

Ethylbenzene

Ortho-Xylene

Styrene

1,1,1-Trichloroethane

The detection of toluene at low, trace levels is a laboratory artifact derived from the analytical methodology.

Ethylbenzene was detected at trace levels; twice in the North Aquifer raw water and treated water, once in the South Aquifer raw water and three times in the Site 1 water.

Ortho-Xylene (O-Xylene) was detected at a trace level in the Site 1 water.

The detected trace levels of Styrene are also considered to be laboratory artifacts resulting from the polystyrene shipping containers. The sporadic background levels from this source are in the order of 0.05 $\mu\text{g/L}$.

The volatiles listed above are typically found on an occasional basis at other water supplies included on the DWSP usually at trace

levels.

1,1,1-Trichloroethane was detected at trace levels; once in the North Aquifer raw water, once in the South Aquifer raw water, and three times in the treated water and six times in the Site 1 water.

THMs are formed from reactions between chlorine and naturally occurring organic compounds. Chloroform and other THMs (Chlorodibromomethane, Dichlorobromomethane and occasionally Bromoform) have been found in water supplies drawn from both surface water and groundwater sources.

Chloroform, Chlorodibromomethane, Dichlorobromomethane and Total THMs were detected in the treated water samples from all locations. Bromoform was detected in all samples, mostly at trace levels.

All Total THM occurrences, ranging from 4.45<T to 17.3 $\mu\text{g/L}$ in the North Aquifer and BDL to 13.3 $\mu\text{g/L}$ in the South Aquifer, were well below the ODWO of 350 $\mu\text{g/L}$.

In November, results of the GC/MS method identified N-Nitroso Dimethylamine (NDMA), a known carcinogen, to be present in the raw and treated water from the south aquifer (well E9). Concentrations were reported as approximate values; 3.0 $\mu\text{g/L}$ in the raw water and 4.0 $\mu\text{g/L}$ in the treated water. Subsequent analyses using more sensitive analytical techniques confirmed the presence of NDMA in

the south aquifer at 40.0 µg/L. In lieu of a drinking water guideline for NDMA, an interim guideline of 0.014 ng/L was developed for use based on the United States Environmental Protection Agency's ambient water quality criteria. The District Officer was notified with a DWSP "action alert" as soon as the first results were reported and the municipality closed the affected wells before they could be resampled. NDMA was not found in samples from the north aquifer. The north aquifer then became the sole raw water source.

As a result of these findings, the region and the municipality instituted an intense monitoring program.

CONCLUSIONS

The Elmira Well Supply System, for the sample year 1989, produced water of acceptable quality. NDMA was detected above an interim guideline. Sampling of the distribution system after the affected aquifer had been closed produced no quantifiable levels of NDMA.

RECOMMENDATIONS

Sampling for NDMA should be continued at the north aquifer and at any new well field that may be developed in the vicinity. Concentrations of NDMA should be well below guideline levels before the south aquifer is reopened as a raw water source.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SAMPLE DAY CONDITIONS

TREATMENT CHEMICAL DOSAGES (MG/L)

DATE	ELMIRA WELL SUPPLY (NORTH AQUIFER ESA)		ELMIRA WELL SUPPLY (SOUTH AQUIFER E9)	
	DELAY * TIME(HRS)	FLOW (1000K3)	DELAY * TIME(HRS)	FLOW (1000K3)
JAN 17	.6	1.7	.5	4.2
FEB 14	.2	1.7	.2	4.3
MAR 21	.5	1.8	.3	4.3
APR 18	.	1.8	.	4.4
MAY 16	.5	1.7	.3	3.9
JUN 20	.3	1.8	.3	4.2
JUL 18	.	1.9	.5	4.2
AUG 22	.3	1.8	.3	4.2
SEP 19	.	1.8	.3	4.2
OCT 17	.2	1.8	.3	4.4
NOV 21	.4	1.8	.	.
DEC 19	.3	1.8	.28	.

* THE DELAY TIME BETWEEN THE RAW AND TREATED WATER SAMPLING, SHOULD ESTIMATE THE RETENTION TIME

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAM	PARAMETER	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	
		TOTAL POSITIVE	TRACE	TOTAL POSITIVE	TRACE	TOTAL POSITIVE	TRACE	TOTAL POSITIVE	TRACE	TOTAL POSITIVE	TRACE
BACTERIOLOGICAL	FECAL COLIFORM MF	12	0	0	0	9	0	0	0	0	0
	STANDARD PLATE CMT MF	0	0	11	0	0	0	10	1	0	11
	TOTAL COLIFORM MF	12	0	0	11	0	0	0	10	0	11
	T COLIFORM BCKGRD MF	12	0	0	11	1	0	9	0	0	11
*TOTAL SCAM BACTERIOLOGICAL		36	0	0	33	2	0	27	0	0	33
*TOTAL GROUP BACTERIOLOGICAL		36	0	0	33	2	0	27	0	0	33
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	1	0	0	10	10	0	1	0	0	8
	FLD CHLORINE FREE	1	0	0	11	11	0	1	0	0	10
	FLD CHLORINE (TOTAL)	1	0	0	11	11	0	1	0	0	19
	FLD PH	12	12	0	11	11	0	10	0	10	0
	FLD TEMPERATURE	11	11	0	10	10	0	9	0	9	0
*TOTAL SCAM CHEMISTRY (FLD)		26	23	0	53	53	0	22	19	0	47
CHEMISTRY (LAB)	ALKALINITY	12	12	0	11	11	0	10	0	10	0
	CALCIUM	12	12	0	11	11	0	10	0	10	0
	CYANIDE	12	0	0	11	0	0	10	0	10	0
	CHLORIDE	12	12	0	11	11	0	10	0	10	0
	COLOUR	12	0	12	11	4	7	10	1	8	10
	CONDUCTIVITY	12	12	0	11	11	0	10	0	10	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE				S				S				SITE 1			
		M		M		S		S		S		S		S		S	
		AQUIFER RAW		AQUIFER TREATED		AQUIFER RAW		AQUIFER TREATED		AQUIFER RAW		AQUIFER TREATED		AQUIFER RAW		AQUIFER TREATED	
		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE		TOTAL POSITIVE TRACE	
CHEMISTRY (LAB)		12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	21
	FLUORIDE	12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	0
	HARDNESS	12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	0
	IONCAL	12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	0
	LANGELIERS INDEX	12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	0
	MAGNESIUM	12	0	11	11	0	10	10	0	10	0	10	0	10	0	22	0
	SODIUM	12	11	0	11	0	10	10	0	10	0	10	0	10	0	22	0
	AMMONIUM TOTAL	12	2	7	11	1	2	10	0	7	10	1	2	10	0	22	5
	NITRITE	12	9	3	11	2	6	10	2	8	10	1	7	10	1	22	3
	TOTAL NITRATES	12	12	0	11	0	10	10	0	10	0	10	0	10	0	22	0
	NITROGEN TOT KJELD	12	12	0	11	9	2	10	2	8	10	1	9	10	1	22	7
	PH	12	12	0	11	11	0	10	10	0	10	10	0	10	0	22	0
	PHOSPHORUS FIL REACT	12	0	7	11	1	5	10	0	8	10	2	4	10	0	22	0
	PHOSPHORUS TOTAL	12	1	9	11	1	9	10	1	8	10	1	8	10	0	22	0
	SULPHATE	12	12	0	11	11	0	10	10	0	10	10	0	10	0	22	0
	TURBIDITY	12	12	0	11	10	1	10	10	0	10	9	1	10	1	22	21
*TOTAL SCAN CHEMISTRY (LAB)		252	191	38	231	170	32	210	146	47	210	145	40	407	322	59	
METALS		12	0	5	11	0	5	10	0	3	10	0	4	22	0	10	
	SILVER	12	12	0	11	11	0	10	10	0	10	10	0	22	22	0	
	ALUMINUM	12	0	11	11	1	10	10	3	6	10	2	8	22	4	18	
	ARSENIC	12	12	0	11	11	0	10	10	0	10	10	0	22	22	0	
	BARIUM	12	12	0	11	11	0	10	10	0	10	10	0	22	22	0	
	BORON	12	12	0	11	11	0	10	10	0	10	10	0	22	22	0	

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

[illegible]

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1969)													
SCAM	PARAMETER	SITE				SITE 1							
		N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED					
		TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE				
CHLOROAROMATICS													
	123 TRICHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	0	0
	1234 T-CHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	0	0
	1235 T-CHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	10	0
	124 TRICHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	10	0
	1245 T-CHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	10	0
	135 TRICHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	10	0
	HCB	11	0	0	10	0	0	9	0	0	0	10	0
	HEXACHLOROETHANE	11	0	0	10	0	0	9	0	0	0	10	0
	OCTACHLOROSTYRENE	11	0	0	10	0	0	9	0	0	0	10	0
	PENTACHLOROBENZENE	11	0	0	10	0	0	9	0	0	0	10	0
	236 TRICHLOROTOLUENE	11	0	0	10	0	0	9	0	0	0	10	0
	245 TRICHLOROTOLUENE	11	0	0	10	0	0	9	0	0	0	10	0
	26A TRICHLOROTOLUENE	11	0	0	10	0	0	9	0	0	0	10	0
*TOTAL SCAM CHLOROAROMATICS	154	0	0	0	140	0	0	126	0	0	0	140	0
CHLOROPHENOLS													
	234 TRICHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
	234S T-CHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
	245-TRICHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
	246-TRICHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
	PENTACHLOROPHENOL	2	0	0	2	0	0	1	0	0	1	0	0
*TOTAL SCAM CHLOROPHENOLS	12	0	0	0	12	0	0	6	0	0	6	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE				N AQUIFER TREATED				S AQUIFER TREATED				SITE 1			
		TOTAL	POSITIVE	TRACE	TOTAL	TOTAL	POSITIVE	TRACE	TOTAL	TOTAL	POSITIVE	TRACE	TOTAL	TOTAL	POSITIVE	TRACE	TOTAL
PAN	PMANTHRENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	ANTHRACENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	FLUORANTHENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	PYRENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	BENZO(A)ANTHRACENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	CHRYSENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	DIMETH. BENZ(A)ANTHR	6	0	0	6	0	0	0	5	0	0	0	5	0	0	0	0
	BENZO(E) PYRENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	BENZO(B) FLUORANTHENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	PERYLENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	BENZO(K) FLUORANTHENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	BENZO(A) PYRENE	8	0	0	7	0	0	0	6	0	0	1	5	0	0	0	0
	BENZO(G,H,I) PERYLENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	DIBENZO(A,H) ANTHRAC	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	INDENO(1,2,3-C,D) PY	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	BENZO(B) CHRYSENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
	CORONENE	12	0	0	11	0	0	0	10	0	0	0	10	0	0	0	0
*TOTAL SCAN PAN		194	0	0	178	0	0	0	161	0	1	160	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	11	0	0	10	0	0	0	9	0	0	9	0	0	10	0	0
	ALPHA BHC	11	0	0	10	0	0	0	9	0	0	9	0	0	10	0	1
	BETA BHC	11	0	0	10	0	0	0	9	0	0	9	0	0	10	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE		N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1			
		TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE	TOTAL	POSITIVE TRACE		
PESTICIDES & PCB	LINDANE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	ALPHA CHLORDANE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	GAMMA CHLORDANE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	DIELDRIN	11	0	0	0	10	0	0	0	9	0	0	10	0	
	METHOMYCHLOR	11	0	0	0	10	0	0	0	9	0	0	10	0	
	ENDOSULFAN 1	11	0	0	0	10	0	0	0	9	0	0	10	0	
	ENDOSULFAN 11	11	0	0	0	10	0	0	0	9	0	0	10	0	
	ENDRIN	11	0	0	0	10	0	0	0	9	0	0	10	0	
	ENDOSULFAN SULPHATE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	HEPTACHLOR EPOXIDE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	HEPTACHLOR	11	0	0	0	10	0	0	0	9	0	0	10	0	
	MIREX	11	0	0	0	10	0	0	0	9	0	0	10	0	
	OMYCHLORDANE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	OPDPT	11	0	0	0	10	0	0	0	9	0	0	10	0	
	PCB	11	0	0	0	10	0	0	0	9	0	0	10	0	
	DDO	11	0	0	0	10	0	0	0	9	0	0	10	0	
	PPDDE	11	0	0	0	10	0	0	0	9	0	0	10	0	
	PPDPT	11	0	0	0	10	0	0	0	9	0	0	10	0	
	AMETRIINE	12	0	0	0	11	0	0	0	0	10	0	6	0	0
	ATRAZINE	12	0	0	0	11	0	0	0	0	10	0	6	0	0
ATRAZONE	12	0	0	0	11	0	0	0	0	10	0	6	0	0	
CYANAZINE (BLADEX)	12	0	0	0	11	0	0	0	0	10	0	6	0	0	
D-ETHYL ATRAZINE	12	0	0	0	11	0	0	0	0	10	0	6	0	0	
D-ETHYL SIMAZINE	12	0	0	0	11	0	0	0	0	10	0	6	0	0	

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1969)

SCAN	PARAMETER	SITE		N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	PROMETONE	12	0	0	11	0	0	9	0	0	10	0	0
	PROPAMINE	12	0	0	11	0	0	9	0	0	10	0	0
	PROMETRINE	12	0	0	11	0	0	9	0	0	10	0	0
	METRIBUZIN (SENCOR)	12	0	0	11	0	0	9	0	0	10	0	0
	SINAZINE	12	0	0	11	0	0	9	0	0	10	0	0
	ALACHLOR (LASSO)	12	0	0	11	0	0	9	0	0	10	0	0
	METOLACHLOR	12	0	0	11	0	0	9	0	0	10	0	0
*TOTAL SCAN PESTICIDES & PCB		307	0	0	353	0	0	306	0	0	319	0	0

PHENOLICS	PHENOLICS	12	2	8	11	2	3	10	8	1	10	2	8
		12	2	8	11	2	3	10	8	1	10	2	8
*TOTAL SCAN PHENOLICS													

SPECIFIC PESTICIDES	TOXAPHENE	11	0	0	10	0	0	9	0	0	9	0	0
	2,4,5-T	2	0	0	2	0	0	1	0	0	1	0	0
	2,4-D	2	0	0	2	0	0	1	0	0	1	0	0
	2,4-DG	2	0	0	2	0	0	1	0	0	1	0	0
	2,4-D PROPIONIC ACID	2	0	0	2	0	0	1	0	0	1	0	0
	DICAMBIA	2	0	0	2	0	0	1	0	0	1	0	0
	PICHLORAN	0	0	0	0	0	0	0	0	0	0	0	0
SILVER		2	0	0	2	0	0	1	0	0	1	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE		N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
SPECIFIC PESTICIDES	DIAZINON	2	0	0	2	0	0	1	0	0	1	0	0
	DICHLOROVOS	2	0	0	2	0	0	1	0	0	1	0	0
	CHLORPYRIFOS	2	0	0	2	0	0	1	0	0	1	0	0
	ETHION	2	0	0	2	0	0	1	0	0	1	0	0
	AZINPHOS-METHYL	0	0	0	0	0	0	0	0	0	0	0	0
	MALATHION	2	0	0	2	0	0	1	0	0	1	0	0
	NEVINPHOS	2	0	0	2	0	0	1	0	0	1	0	0
	METHYL PARATHION	2	0	0	2	0	0	1	0	0	1	0	0
	METHYLTRITRINON	2	0	0	2	0	0	1	0	0	1	0	0
	PARATHION	2	0	0	2	0	0	1	0	0	1	0	0
	PHORATE	2	0	0	2	0	0	1	0	0	1	0	0
	RELDAN	2	0	0	2	0	0	1	0	0	1	0	0
	RONNEL	2	0	0	2	0	0	1	0	0	1	0	0
	ANTHOCARS	0	0	0	0	0	0	0	0	0	0	0	0
	BENOMYL	1	0	0	1	0	0	1	0	0	1	0	0
	BUX	0	0	0	0	0	0	0	0	0	0	0	0
	CARBOFURAN	2	0	0	2	0	0	1	0	0	1	0	0
	CTCP	2	0	0	2	0	0	1	0	0	1	0	0
	DIALATE	2	0	0	2	0	0	1	0	0	1	0	0
	EPTAM	2	0	0	2	0	0	1	0	0	1	0	0
	IPC	2	0	0	2	0	0	1	0	0	1	0	0
	PROPORUR	2	0	0	2	0	0	1	0	0	1	0	0
	CARBARYL	2	0	0	2	0	0	1	0	0	1	0	0
	BUTYLATE	2	0	0	2	0	0	1	0	0	1	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE			N AQUIFER RAW			N AQUIFER TREATED			S AQUIFER RAW			S AQUIFER TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
*TOTAL SCAN SPECIFIC PESTICIDES																			
		64	0	0	63	0	0	36	0	0	36	0	0	36	0	0	10	0	0

VOLATILES																			
	BENZENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	TOLUENE	12	0	1	11	0	0	10	0	0	10	0	3	10	0	0	11	0	3
	ETHYLBENZENE	12	0	2	11	0	2	10	0	1	10	0	0	10	0	0	11	0	2
	P-XYLENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	M-XYLENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	O-XYLENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	STYRENE	12	0	10	11	0	3	10	0	8	10	0	0	10	0	0	11	0	1
	1,1 DICHLOROETHYLENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	3
	METHYLENE CHLORIDE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	1,1,2DICHLOROETHYLENE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	1,1 DICHLOROETHANE	12	0	0	11	0	0	10	0	0	10	0	0	10	0	0	11	0	0
	CHLOROFORM	12	0	0	11	0	11	0	10	0	10	7	2	11	8	1	11	0	0
	111, TRICHLOROETHANE	12	0	1	11	0	0	10	0	1	10	0	3	11	0	6	11	0	0
	1,2 DICHLOROETHANE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0
	CARBON TETRACHLORIDE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0
	1,2 DICHLOROPROPANE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0
	TRICHLOROETHYLENE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0
	DICHLOROMETHANE	12	0	0	11	0	11	0	10	0	10	9	1	11	9	0	11	0	0
	112 TRICHLOROETHANE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0
	CHLORODIBROMOETHANE	12	0	0	11	0	11	0	10	0	10	9	0	11	9	0	11	0	0
	1-CHLOROETHYLENE	12	0	0	11	0	0	10	0	0	10	0	0	11	0	0	11	0	0

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY

SUMMARY TABLE OF RESULTS (1989)

SITE	N AQJIFER RAW TOTAL POSITIVE TRACE	N AQJIFER TREATED TOTAL POSITIVE TRACE	S AQJIFER RAW TOTAL POSITIVE TRACE	S AQJIFER TREATED TOTAL POSITIVE TRACE	TOTAL POSITIVE TRACE	SITE 1 TRACE
BROMOFORM	0	11	0	7	11	6
1122 1-CHLOROETHANE	0	11	0	0	11	0
CHLOROBENZENE	0	11	0	0	11	0
1,4 DICHLOROBENZENE	0	11	0	0	11	0
1,3 DICHLOROBENZENE	0	11	0	0	11	0
1,2 DICHLOROBENZENE	0	11	0	0	11	0
ETHYLENE DIBROMIDE	0	11	0	0	11	0
TOTL TRINALONETANES	0	11	10	9	11	2
*TOTAL SCAM VOLATILES	348	319	43	41	319	26
*TOTAL GROUP ORGANIC	1171	1076	45	43	757	27
TOTAL	1775	1657	409	378	1807	217

KEY TO TABLE 5 and 6

- A** **ONTARIO DRINKING WATER OBJECTIVES (ODWO)**
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
 Poor water quality is indicated when :
 - total coliform counts > 0 < 5
 - P/A Bottle Test is present after 48 hours
 - Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
 - Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
 - Standard Plate Count should not exceed 500 organisms per ml at 35 °C within 48 hours
2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
 - hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.
- B** **HEALTH & WELFARE CANADA (H&W)**
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, a total)
- C** **WORLD HEALTH ORGANIZATION (WHO)**
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV
- D** **US ENVIRONMENTAL PROTECTION AGENCY (EPA)**
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria
5. Maximum Contaminant Level Goal (MCLG)
- F** **EUROPEAN ECONOMIC COMMUNITY (EEC)**
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissible Concentration (MADC)
- G** **CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE**
- H** **USSR MAXIMUM PERMISSIBLE CONCENTRATION**
- I** **NEW YORK STATE AMBIENT WATER GUIDELINE**
- N/A** **NONE AVAILABLE**

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:

1. Exclude the low-level data because of this uncertainty factor. Studies of long-term environmental trends and modelling may however, be adversely affected by the exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported with the code "<T". Results qualified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. The average of such data however, is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!IV	No Data: Inverted Septum
!LA	No Data: Laboratory Accident
!LD	No Data: Test Queued After Sample Discarded

!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
USD	Unreliable: Sample Decomposition Noted
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1			
TYPE								STANDING		FREE FLOW	
BACTERIOLOGICAL											
FECAL COLIFORM MF (CT/100ML)											
DET'N LIMIT = 0											
GUIDELINE = 0 (A1)											
JAN	0 T06	.	0 T06	.	0 T06	.	0 T06	.	.	.	.
FEB	0 T24	.	0 T24	.	0 T24	.	0 T24	.	.	.	.
MAR	0 T06	.	0 T06	.	0 T06	.	0 T24	.	.	.	.
APR	0 T24	.	0	.	0	.	0	.	.	.	.
MAY	0	.	0	.	0	.	0	.	.	.	.
JUN	0	.	0	.	0	.	0	.	.	.	.
JUL	0	.	0	.	0	.	0	.	.	.	.
AUG	0	.	0	.	0	.	0	.	.	.	.
SEP	0	.	0	.	0	.	0	.	.	.	.
OCT	0	.	0	.	0	.	0	.	.	.	.
NOV	0	.	0	.	0	.	0	.	.	.	.
DEC	0	.	0	.	0	.	0	.	.	.	.
STANDARD PLATE CNT MF (CT/ML)											
DET'N LIMIT = 0											
GUIDELINE = 500/ML (A1)											
JAN	.	1 <=	.	3 <=	.	0 <=	.	.	.	.	.
FEB	.	18 T24	.	0 <=	.	250 T24	.	.	.	.	.
MAR	.	2 <=	.	5 <=	.	3 <=	.	.	.	.	.
APR	.	0 <=	.	0 <=	.	0 <=	.	.	.	.	.
MAY	.	0 <=	.	0 <=	.	0 <=	.	.	.	.	.
JUN	.	2 <=	.	0 <=	.	0 <=	.	.	.	.	.
JUL	.	0 <=	.	0 <=	.	0 <=	.	.	.	.	.
AUG	.	1 <=	.	2 <=	.	13	.	.	.	.	.
SEP	.	.	.	13	.	10	.	.	.	.	.
OCT	.	1 <=	.	.	.	.	.	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
NOV	.	1 <>>	.	.	.	1 <>>
DEC	.	0 <>>	.	.	.	11
TOTAL COLIFORM MF (CT/100ML)						
		DET'M LIMIT = 0		GUIDELINE = 5/100ML(A1)		
JAN	0 T06	0 T06	0 T06	0 T06	.	0 T06
FEB	0 T24	0 T24	0 T24	0 T24	.	0 T24
MAR	0 T06	0 T06	0 T06	0 T06	.	0 T06
APR	0 T24	0 T24	0 T24	0 T24	.	0 T24
MAY	0	0	0	0	.	0
JUN	0	0	0	0	.	0
JUL	0	0	0	0	.	0
AUG	0	0	0	0	.	0
SEP	0	0	0	0	.	0
OCT	0	0	0	0	.	0
NOV	0	0	0	0	.	0
DEC	0	0	0	0	.	0
T COLIFORM BCKGRD MF (CT/100ML)						
		DET'M LIMIT = 0		GUIDELINE = N/A		
JAN	0 T06	0 T06	0 T06	0 T06	.	0 T06
FEB	0 T24	1 T24	0 T24	0 T24	.	0 T24
MAR	0 T06	0 T06	0 T06	0 T06	.	0 T06
APR	0 T24	0 T24	0 T24	0 T24	.	0 T24
MAY	0	0	0	0	.	0
JUN	0	0	0	0	.	0
JUL	0	0	0	0	.	0

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
AUG	0	0	0	0	.	0
SEP	0	.	0	0	.	0
OCT	0	0	.	0	.	0
NOV	0	0	.	.	.	0
DEC	0	0	.	.	.	0

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE						
TYPE		N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1
CHEMISTRY (FLD)						
FLD CHLORINE (COMB) (MG/L)		DET'N LIMIT = N/A		GUIDELINE = N/A		
JAN	.	.050	.	.100	.	.050
MAR	.	.100	.	.	.	.
APR	.	.050	.	.050	.	.
MAY	.	.200	.	.050	.	.100
JUN	.	.200	.000	.000	.100	.000
JUL	.	.200	.	.000	.	.
AUG	.	.100	.	.100	.100	.000
SEP	.000	.	.	.200	.000	.000
OCT	.	.100	.	.150	.000	.050
NOV	.	.050	.	.	.000	.100
DEC	.	.100	.	.	.050	.100
FLD CHLORINE FREE (MG/L)						
		DET'N LIMIT = N/A		GUIDELINE = N/A		
JAN	.	.900	.	.200	.	.150
FEB	.	.600	.	.400	.	.200
MAR	.	.700	.	.200	.100	.200
APR	.	.700	.	.250	.	.200
MAY	.	.600	.	.250	.100	.100
JUN	.	.700	.000	.500	.200	.100
JUL	.	.500	.	.500	.	.
AUG	.	.200	.	.400	.000	.000
SEP	.000	.	.	.300	.000	.100
OCT	.	.100	.	.150	.000	.000
NOV	.	.400	.	.	.000	.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
DEC		.600			.050	
FLD CHLORINE (TOTAL) (MG/L)						
		DET'N LIMIT = N/A		GUIDELINE = N/A		
JAN		.950		.300		.200
FEB		.600		.400		.200
MAR		.800		.200	.100	.200
APR		.750		.300		.200
MAY		.800		.300	.100	.200
JUN		.900	.000	.500	.100	.100
JUL		.700		.500		
AUG		.300		.500	.100	.000
SEP	.000			.500	.000	.100
OCT		.200		.300	.000	.050
NOV		.450			.000	.100
DEC		.700			.100	.100
FLD PH (DHW/LESS)						
		DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)		
JAN	7.250	7.250	7.350	7.350	7.500	7.400
FEB	7.400	7.400	7.500	7.500	7.600	7.400
MAR	7.300	7.300	7.500	7.500	7.500	7.500
APR	7.300	7.300	7.350	7.350	7.500	7.400
MAY	7.300	7.300	7.400	7.400	7.500	7.500
JUN	7.300	7.300	7.500	7.500	7.500	7.500
JUL	7.200	7.200	7.400	7.400		
AUG	7.500	7.500	7.500	7.500	7.500	7.500

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE		SITE 1				
TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
SEP	7.300	.	7.500	7.500	7.500	7.500
OCT	7.400	7.400	7.500	7.500	7.500	7.500
NOV	7.500	7.500	.	.	7.500	7.500
DEC	7.400	7.400	.	.	7.500	7.500

FLD TEMPERATURE (DEG.C)		GUIDELINE = 15 (A1)				
		DET'M LIMIT = N/A				

JAN	9.200	9.200	9.200	9.200	14.000	9.000
FEB	9.500	9.500	9.500	9.500	13.000	11.000
MAR	9.500	9.500	9.000	9.000	9.000	8.000
APR	9.200	9.200	9.000	9.000	10.000	9.000
JUN	9.000	9.000	9.000	9.000	9.000	9.000
JUL	9.000	9.000	9.000	9.000	.	.
AUG	9.000	9.000	9.000	9.000	18.000	17.000
SEP	9.500	.	9.500	9.500	17.000	16.000
OCT	9.000	9.000	9.500	9.500	17.000	14.000
NOV	9.000	9.000	.	.	14.000	11.000
DEC	9.000	9.000	.	.	13.000	9.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
CHEMISTRY (LAB)						
ALKALINITY (MG/L)		DET'N LIMIT = .200	GUIDELINE = 30-500 (A4)			
JAN	282.000	282.800	269.800	271.300	274.400	268.600
FEB	274.400	274.400	263.200	265.500	266.200	265.900
MAR	199.500	212.000	209.100	190.800	216.100 USD	218.200 USD
APR	140.000 USD	135.000 USD	253.600	254.200	261.300	259.400
MAY	245.900	256.800	246.100	254.400	255.500	258.300
JUN	235.900	249.000	222.800	221.300	232.200	235.100
JUL	263.800	266.900	239.000	262.300	.	.
AUG	256.600	253.300	246.600	240.300	261.900	257.100
SEP	253.800	.	248.100	248.700	268.900	267.500
OCT	269.000	263.200	253.700	264.300	265.700	264.500
NOV	270.200	273.500	.	.	267.800	263.600
DEC	237.500	253.400	.	.	267.800	210.500
CALCIUM (MG/L)						
		DET'N LIMIT = .100	GUIDELINE = 100 (F2)			
JAN	120.000	127.000	113.000	115.000	121.000	122.000
FEB	128.000	129.000	119.000	121.000	120.000	120.000
MAR	116.000	116.000	109.000	105.000	122.000	125.000
APR	124.000	130.000	116.000	122.000	126.000	117.000
MAY	131.000	132.000	125.000	126.000	126.000	126.000
JUN	132.000	132.000	124.000	125.000	126.000	126.000
JUL	134.000	135.000	113.000	123.000	.	.
AUG	135.000	133.000	124.000	124.000	122.000	124.000
SEP	128.000	.	113.000	116.000	132.000	132.000
OCT	139.000	137.000	126.000	126.000	127.000	129.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
NOV	132.000	133.000	.	.	143.000	142.000
DEC	115.000	124.000	.	.	150.000	124.000
CYANIDE (MG/L)						
			DET'N LIMIT = 0.001		GUIDELINE = .200 (A1)	
JAN	BOL	BOL	BOL	BOL	.	BOL
FEB	BOL	BOL	BOL	BOL	.	BOL
MAR	BOL	BOL	BOL	BOL	.	BOL
APR	BOL	BOL	BOL	BOL	.	BOL
MAY	BOL	BOL	BOL	BOL	.	BOL
JUN	BOL	BOL	BOL	BOL	.	BOL
JUL	BOL	BOL	BOL	BOL	.	.
AUG	BOL	BOL	BOL	BOL	.	BOL
SEP	BOL	.	BOL	BOL	.	BOL
OCT	BOL	BOL	BOL	BOL	.	BOL
NOV	BOL	BOL	.	.	.	BOL
DEC	BOL	BOL	.	.	.	BOL
CHLORIDE (MG/L)						
			DET'N LIMIT = .200		GUIDELINE = 250 (A3)	
JAN	18.600	19.600	38.600	39.000	38.900	38.800
FEB	19.600	20.500	37.400	37.200	37.000	37.600
MAR	19.700	20.300	38.400	39.100	38.700	38.800
APR	19.400	20.000	38.500	39.000	39.100	39.000
MAY	20.500	21.100	40.400	32.800	39.400	39.300
JUN	20.700	21.400	36.900	37.100	36.900	37.200
JUL	20.600	21.500	34.500	35.100	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
AUG	20.000	20.800	35.100	35.500	35.000	35.000
SEP	21.100	.	36.500	36.900	53.500	52.700
OCT	21.200	21.700	18.400	37.600	37.500	37.800
NOV	20.200	20.800	.	.	27.200	26.500
DEC	20.200	20.800	.	.	26.700	27.000
COLOUR (NZU)						
		DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)		
JAN	1.000 <T	1.500 <T	1.000 <T	1.500 <T	.500 <T	1.000 <T
FEB	1.000 <T	2.500	1.500 <T	2.000 <T	.500 <T	2.000 <T
MAR	1.500 <T	2.500	2.500	2.500	2.500	2.500
APR	1.000 <T	2.500	.500 <T	1.500 <T	1.000 <T	1.500 <T
MAY	.500 <T	2.000 <T	BOL	1.000 <T	1.000 <T	1.500 <T
JUN	1.500 <T	2.000 <T	1.000 <T	1.000 <T	1.000 <T	1.000 <T
JUL	1.000 <T	1.500 <T	1.500 <T	1.500 <T	.500 <T	1.000 <T
AUG	1.500 <T	1.500 <T	1.000 <T	1.000 <T	.500 <T	.500 <T
SEP	1.000 <T	1.000 <T	1.000 <T	1.500 <T	1.000 <T	.500 <T
OCT	1.000 <T	1.500 <T	1.000 <T	1.500 <T	1.000 <T	2.000 <T
NOV	1.000 <T	1.500 <T	.	.	1.500 <T	2.000 <T
DEC	1.000 <T	2.500	.	.	1.500 <T	3.000
CONDUCTIVITY (UMHO/CM)						
		DET'N LIMIT = 1		GUIDELINE = 400 (F2)		
JAN	980	887	894	895	899	896
FEB	866	866	866	892	891	890
MAR	793	817	832	807	848	851
APR	878	687	892	894	900	899

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1969

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	SITE 1	FREE FLOW
MAY	842	861	868	880	880	883	883
JUN	831	859	826	825	842	841	841
JUL	865	874	819	860	.	.	.
AUG	854	855	833	825	843	845	845
SEP	866	.	816	814	970	966	966
OCT	898	882	871	898	900	896	896
NOV	890	897	.	.	977	962	962
DEC	849	873	.	.	982	906	906
FLUORIDE (MG/L)							
		DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)			
JAN	.280	.280	.240	.240	.240	.240	.240
FEB	.280	.260	.240	.260	.260	.260	.260
MAR	.260	.260	.220	.240	.240	.240	.240
APR	.240	.280	.220	.220	.240	.240	.240
MAY	.280	.280	.260	.260	.260	80L	80L
JUN	.240	.260	.200	.200	.220	.220	.220
JUL	.280	.280	.240	.240	.	.	.
AUG	.280	.280	.240	.240	.240	.240	.240
SEP	.260	.	.220	.220	.240	.240	.240
OCT	.280	.280	.240	.260	.240	.240	.240
NOV	.280	.280	.	.	.340	.340	.340
DEC	.240	.260	.	.	.340	.320	.320
HARDNESS (MG/L)							
		DET'N LIMIT = .500		GUIDELINE = 80-100 (A4)			
JAN	443.000	463.000	437.000	439.000	455.000	460.000	460.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING		FREE FLOW
					SITE 1		
FEB	460.000	467.000	451.000	456.000	452.000	454.000	
MAR	430.000	430.000	426.000	414.000	465.000	466.000	
APR	455.000	469.000	443.000	457.000	468.000	449.000	
MAY	471.000	475.000	470.000	470.000	471.000	470.000	
JUN	474.000	477.000	464.000	465.000	468.000	470.000	
JUL	478.000	484.000	433.000	460.000	-	-	
AUG	482.000	477.000	465.000	465.000	460.000	464.000	
SEP	466.000	-	431.000	437.000	491.000	492.000	
OCT	494.000	492.000	467.000	468.000	476.000	480.000	
NOV	471.000	474.000	-	-	521.000	515.000	
DEC	431.000	453.000	-	-	534.000	469.000	
[ONCAL (DIMENSIONLESS)							
				DET'N LIMIT = N/A	GUIDELINE = N/A		
JAN	10.360	5.220	9.013	8.274	4.585	3.387	
FEB	1.571	.487	1.127	.363	1.314	2.834	
MAR	9.369	6.903	7.022	7.490	10.950	15.920	
APR	23.740	29.410	1.946	.513	1.785	2.318	
MAY	4.929	3.636	4.789	6.002	3.627	2.745	
JUN	4.807	1.198	9.834	6.062	3.061	3.886	
JUL	5.883	7.181	3.296	2.564	-	-	
AUG	3.183	2.842	3.943	5.424	.139	1.953	
SEP	2.030	-	1.500	2.879	.495	.816	
OCT	3.940	4.963	6.817	.327	.964	2.414	
NOV	.526	1.689	-	-	.177	.101	
DEC	2.040	.698	-	-	1.578	.374	

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	W AQUIFER RAW		W AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		STANDING	FREE FLOW	SITE 1
	DET'N LIMIT = N/A		DET'N LIMIT = N/A		GUIDELINE = N/A		GUIDELINE = N/A				
LANGELIERS INDEX (DIMENSIONLESS)											
JAN	.960	.870	1.098	1.128	1.015	1.120					
FEB	1.170	1.224	1.211	1.191	1.229	1.218					
MAR	1.044	1.029	1.095	1.070	.988	1.012					
APR	.625	.889	1.153	1.196	1.322	1.266					
MAY	1.195	1.196	1.144	1.221	1.323	1.267					
JUN	1.151	1.143	1.089	.970	1.093	1.129					
JUL	1.304	1.242	1.239	1.321	-	-					
AUG	1.206	1.154	1.163	1.112	1.331	1.280					
SEP	1.137	-	1.176	1.218	1.401	1.379					
OCT	1.397	1.252	1.170	1.397	1.442	1.417					
NOV	1.297	1.315	-	-	1.383	1.264					
DEC	1.213	1.283	-	-	1.464	1.150					
MAGNESIUM (MG/L)											
		DET'N LIMIT = .050		GUIDELINE = 30 (F2)							
JAN	35.200	35.300	37.800	37.100	37.500	37.500					
FEB	34.400	35.000	37.300	37.500	37.400	37.500					
MAR	34.300	34.700	37.100	36.800	37.000	37.200					
APR	35.100	35.100	37.500	37.200	37.400	37.800					
MAY	34.800	35.300	38.300	37.800	38.100	37.700					
JUN	35.300	35.800	37.600	37.300	37.500	37.700					
JUL	35.100	35.500	36.800	36.900	-	-					
AUG	35.300	35.200	37.700	37.800	37.800	37.700					
SEP	35.600	-	36.100	35.800	39.400	39.400					
OCT	35.900	36.500	37.200	37.200	38.500	38.400					
NOV	34.600	34.400	-	-	39.800	39.000					

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	
									STANDING	FREE FLOW
DEC	34,900	34,700							38,600	38,700
SODIUM (MG/L)										
	DET'M LIMIT = .200				GUIDELINE = 200 (C3)					
JAN	11,800	12,800	15,400	16,000	16,000	16,000	16,000	16,000	16,400	16,000
FEB	11,600	12,000	14,600	14,800	14,800	14,800	14,800	14,600	14,600	14,400
MAR	11,800	12,200	15,600	16,000	16,000	16,000	16,000	15,600	15,600	15,400
APR	12,200	13,000	15,800	16,000	16,000	16,000	16,000	16,200	16,200	16,000
MAY	11,800	12,400	15,600	16,200	16,200	16,200	16,200	15,800	15,800	16,000
JUN	BOL	BOL	6,600	BOL	BOL	BOL	BOL	BOL	BOL	BOL
JUL	12,200	12,600	12,800	12,800	12,800	12,800	12,800	12,600	12,600	12,800
AUG	12,200	13,000	13,000	13,200	13,200	13,200	13,200	23,200	23,200	22,800
SEP	12,600		12,800	12,400	12,400	12,400	12,400	14,400	14,400	14,600
OCT	12,800	13,400	14,000	14,200	14,200	14,200	14,200	15,200	15,200	15,200
NOV	12,600	13,000						15,200	15,200	15,200
DEC	11,800	12,400						14,600	14,600	14,600
AMMONIUM TOTAL (MG/L)										
	DET'M LIMIT = 0.002				GUIDELINE = .05 (F2)					
JAN	.014	.016	.004 <T	.006 <T	.006 <T	.006 <T	.006 <T	.004 <T	.004 <T	.008 <T
FEB	.006 <T	BOL	.008 <T	BOL	BOL	BOL	BOL	BOL	BOL	BOL
MAR	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL
APR	.004 <T	BOL	.006 <T	.010	.010	.010	.010	.028	.012	.012
MAY	.006 <T	BOL	.008 <T	BOL	BOL	BOL	BOL	BOL	BOL	.002 <T
JUN	.014	.002 <T	BOL	BOL	BOL	BOL	BOL	BOL	BOL	.008 <T
JUL	.006 <T	.002 <T	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL
AUG	.002 <T	BOL	.006 <T	.006 <T	.006 <T	.006 <T	.006 <T	.014	.014	.004 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1969

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
SEP	.004 <T	.	.008 <T	.002 <T	BDL	BDL
OCT	.004 <T	BDL	.008 <T	BDL	.024	BDL
NOV	BDL	BDL	.	.	.004 <T	BDL
DEC	BDL	BDL	.	.	.016	.002 <T
NITRITE (MG/L)						
			DET'M LIMIT = 0.001			
			GUIDELINE = 1.000 (A1)			
JAN	.007	.003 <T	.003 <T	.003 <T	.003 <T	.003 <T
FEB	.005	BDL	.001 <T	BDL	.001 <T	BDL
MAR	.008	.005	.005	.003 <T	.007	.004 <T
APR	.007	.001 <T	.004 <T	BDL	.001 <T	.001 <T
MAY	.005	BDL	.003 <T	.002 <T	.001 <T	.001 <T
JUN	.004 <T	.001 <T	.002 <T	.002 <T	.002 <T	.001 <T
JUL	.006	.002 <T	.004 <T	.003 <T	.	.
AUG	.011	.005	.009	.007	.008	.008
SEP	.004 <T	.	.002 <T	.002 <T	.001 <T	.003 <T
OCT	.006	.001 <T	.002 <T	.001 <T	.002 <T	BDL
NOV	.005	BDL	.	.	.002 <T	.002 <T
DEC	.004 <T	.001 <T	.	.	.003 <T	.004 <T
TOTAL NITRATES (MG/L)						
			DET'M LIMIT = .020			
			GUIDELINE = 10.000 (A1)			
JAN	3.450	3.330	2.510	2.610	2.580	2.610
FEB	3.660	3.580	2.310	2.260	2.260	2.270
MAR	3.840	3.870	2.590	2.550	2.570	2.560
APR	3.560	3.560	2.470	2.460	2.480	2.530
MAY	3.750	3.750	2.590	2.500	2.620	2.520

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
NITROGEN TOT KJELD (MG/L)						
						GUIDELINE = N/A
JUN	3.790	4.230	2.200	2.260	2.220	2.110
JUL	3.900	3.910	1.280	1.280	-	-
AUG	3.570	3.700	1.220	1.230	.980	1.180
SEP	3.940	-	.940	.565	4.670	4.560
OCT	3.770	3.870	1.990	1.900	1.950	1.890
NOV	3.710	3.730	-	-	1.910	1.950
DEC	3.580	3.610	-	-	1.760	1.700
NITROGEN TOT KJELD (MG/L)						
						GUIDELINE = N/A
JAN	.110	.120	.090 <T	.080 <T	.090 <T	.090 <T
FEB	.120	.090 <T	.080 <T	.050 <T	.080 <T	.060 <T
MAR	.140	.110	.080 <T	.080 <T	.090 <T	.080 <T
APR	.130	.120	.100	.080 <T	.090 <T	.090 <T
MAY	.160	.120	.110	.100	.090 <T	.100
JUN	.350	.110	.080 <T	.080 <T	.080 <T	.070 <T
JUL	.120	.110	.080 <T	.070 <T	-	-
AUG	.110	.120	.080 <T	.070 <T	.080 <T	.070 <T
SEP	.110	-	.050 <T	.040 <T	.120	.070 <T
OCT	.120	.090 <T	.070 <T	.070 <T	.100	.060 <T
NOV	.110	.130	-	-	.120	.130
DEC	.150	.140	-	-	.160	.120
PH (DIMENSIONLESS)						
						GUIDELINE = 6.5-8.5(A4)
JAN	7.920	7.800	8.100	8.120	7.980	8.090
FEB	8.110	8.160	8.200	8.170	8.210	8.200

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELNIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
MAR	8.160	8.120	8.220	8.250	8.050	8.060
APR	7.870	8.120	8.170	8.190	8.290	8.270
MAY	8.170	8.150	8.140	8.200	8.300	8.240
JUN	8.140	8.110	8.130	8.010	8.110	8.140
JUL	8.260	8.170	8.290	8.290	-	-
AUG	8.150	8.110	8.160	8.120	8.310	8.260
SEP	8.110	-	8.210	8.240	8.340	8.320
OCT	8.310	8.180	8.150	8.360	8.400	8.370
NOV	8.230	8.240	-	-	8.290	8.180
DEC	8.260	8.270	-	-	8.350	8.220
PHOSPHORUS FIL REACT (MG/L)						
		DET'M LIMIT = .0005	GUIDELINE = N/A			
JAN	.001 <T	.003	.001 <T	.002	-	-
FEB	.001 <T	.001 <T	.002 <T	.002 <T	-	-
MAR	.000 <T	.001 <T	.001 <T	.001 <T	-	-
APR	BDL	BDL	.001 <T	.002 <T	-	-
MAY	.000 <T	.000 <T	.002 <T	.001 <T	-	-
JUN	BDL	BDL	BDL	BDL	-	-
JUL	BDL	BDL	BDL	BDL	-	-
AUG	BDL	BDL	.000 <T	BDL	-	-
SEP	.001 <T	-	.001 <T	.005	-	-
OCT	BDL	BDL	.000 <T	BDL	-	-
NOV	.000 <T	.000 <T	-	-	-	-
DEC	.001 <T	.000 <T	-	-	-	-
PHOSPHORUS TOTAL (MG/L)						
		DET'M LIMIT = .002	GUIDELINE = .40 (F2)			

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1		
									STANDING		FREE FLOW
JAN	.002 <T	.004 <T	.004 <T	.003 <T	.003 <T	.004 <T	.004 <T	.004 <T	.	.	.
FEB	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	.	.	.
MAR	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T	.003 <T	.003 <T	.003 <T	.	.	.
APR	.002 <T	.005 <T	.005 <T	.003 <T	.003 <T	.004 <T	.004 <T	.004 <T	.	.	.
MAY	.002 <T	.003 <T	.003 <T	.003 <T	.003 <T	.004 <T	.004 <T	.004 <T	.	.	.
JUN	.025	.013	.010	.010	.010	.015	.015	.015	.	.	.
JUL	.002 <T	.003 <T	.003 <T	.003 <T	.003 <T	.004 <T	.004 <T	.004 <T	.	.	.
AUG	BOL	.002 <T	.002 <T	.002 <T	.002 <T	.003 <T	.003 <T	.003 <T	.	.	.
SEP	.003 <T	.	.	.003 <T	.003 <T	.005 <T	.005 <T	.005 <T	.	.	.
OCT	.002 <T	.002 <T	.002 <T	.002 <T	.002 <T	.003 <T	.003 <T	.003 <T	.	.	.
NOV	.003 <T	.003 <T	.003 <T	.	.	.	.	.	.	.	.
DEC	.002 <T	.003 <T	.003 <T	.	.	.	.	.	.	.	.
SULPHATE (MG/L)											
DET'N LIMIT = .200 GUIDELINE = 500. (A3)											
JAN	190.490	185.840	173.280	171.170	169.200	170.750	170.750	170.750	170.750	170.750	170.750
FEB	171.800	171.400	157.100	157.800	158.600	165.100	165.100	165.100	165.100	165.100	165.100
MAR	169.290	167.890	149.890	153.600	156.000	142.210	142.210	142.210	142.210	142.210	142.210
APR	200.000	200.000	164.100	165.150	162.900	163.450	163.450	163.450	163.450	163.450	163.450
MAY	177.100	176.900	161.600	160.500	160.900	161.600	161.600	161.600	161.600	161.600	161.600
JUN	167.500	169.900	147.000	151.000	156.300	150.800	150.800	150.800	150.800	150.800	150.800
JUL	163.870	158.580	148.270	148.070	.	.	.	.	.	.	.
AUG	187.810	187.600	166.930	166.760	166.580	165.580	165.580	165.580	165.580	165.580	165.580
SEP	178.640	.	142.900	142.250	171.310	171.640	171.640	171.640	171.640	171.640	171.640
OCT	182.360	181.560	172.450	169.010	169.440	168.200	168.200	168.200	168.200	168.200	168.200
NOV	182.460	186.470	.	.	230.340	230.040	230.040	230.040	230.040	230.040	230.040
DEC	179.470	179.600	.	.	234.850	234.340	234.340	234.340	234.340	234.340	234.340

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW

TURBIDITY (FTU)	DET'N LIMIT = .02		GUIDELINE = 1.00 (A1)			
JAN	1.490	.470	.760	.700	.810	.490
FEB	1.240	.400	1.310	.820	.810	.570
MAR	.410	.420	.520	.710	.610	.360
APR	.810	.540	.960	.560	1.450 USD	1.450 USD
MAY	.700	.430	1.100	.310	.580	.630
JUN	1.580	.430	1.240	.610	.680	.610
JUL	.370	.580	.750	.270	-	-
AUG	.490	.500	.570	.560	.680	.400
SEP	.890	-	.750	.600	.370	.310
OCT	.270	.190 <T	.600	.240 <T	.400	.150 <T
NOV	.550	.380	-	-	.360	.430
DEC	.470	.290	-	-	.260	.800

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

TYPE		M AQUIFER RAW		M AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
NOV	6.700	6.400	.	.	9.700	10.000
DEC	4.600	4.500	.	.	4.900	4.500
ARSENIC (UG/L)						
					GUIDELINE = 50.0 (A1)	
					DET'N LIMIT = 0.050	
JAN	.120 <T	.180 <T	.140 <T	.580 <T	.770 <T	.560 <T
FEB	.440 <T	.470 <T	1.100	.970 <T	.870 <T	1.000 <T
MAR	.830 <T	.520 <T	1.100	1.200	1.100	.970 <T
APR	.440 <T	.620 <T	.630 <T	.480 <T	.780 <T	.810 <T
MAY	1.000 <T	1.200	.510 <T	.550 <T	1.100	1.100
JUN	1.000 <T	.810 <T	.860 <T	.930 <T	1.200	.960 <T
JUL	NDL	.920 <T	NDL	.120 <T	.	.
AUG	.440 <T	.640 <T	1.100	.980 <T	.920 <T	.610 <T
SEP	.650 <T	.	1.000 <T	1.100	.950 <T	.820 <T
OCT	.260 <T	.210 <T	.490 <T	.410 <T	.420 <T	.390 <T
NOV	.380 <T	.750 <T	.	.	.820 <T	.930 <T
DEC	.350 <T	.390 <T	.	.	.450 <T	.550 <T
BARIUM (UG/L)						
					GUIDELINE = 1000. (A1)	
					DET'N LIMIT = 0.020	
JAN	32.000	32.000	52.000	51.000	52.000	56.000
FEB	33.000	31.000	55.000	58.000	61.000	59.000
MAR	31.000	36.000	54.000	54.000	54.000	52.000
APR	33.000	33.000	57.000	56.000	58.000	57.000
MAY	33.000	33.000	56.000	55.000	57.000	55.000
JUN	35.000	33.000	60.000	59.000	60.000	57.000
JUL	36.000	38.000	59.000	60.000	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1	
									STANDING	FREE FLOW

BORON (UG/L)										
DET'M LIMIT = 0.200 GUIDELINE = 5000. (A1)										
AUG	34.000		34.000		61.000		62.000		62.000	57.000
SEP	38.000				58.000		55.000		57.000	53.000
OCT	33.000		33.000		54.000		55.000		56.000	53.000
NOV	34.000		34.000						42.000	48.000
DEC	34.000		34.000						41.000	39.000

BERYLLIUM (UG/L)										
DET'M LIMIT = 0.010 GUIDELINE = N/A										
JAN	.120 <T				.080 <T		BOL		.160 <T	.260 <T
FEB	.060 <T		.130 <T		.050 <T		.510		.270 <T	.550
MAR	.260 <T		.480 <T		.430 <T		.490 <T		.300 <T	.610
APR	.110 <T				.200 <T		.030 <T		.220 <T	.240 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
MAY	.160 <T	.250 <T	.230 <T	.250 <T	.230 <T	BDL
JUN	.260 <T	BDL	.060 <T	.270 <T	.270 <T	.100 <T
JUL	.140 <T	.080 <T	.150 <T	.140 <T	.	.
AUG	.210 <T	.230 <T	.280 <T	.320 <T	.360 <T	.220 <T
SEP	.220 <T	.	.180 <T	.160 <T	.170 <T	.080 <T
OCT	BDL	.040 <T	.080 <T	.050 <T	.040 <T	.030 <T
NOV	.060 <T	.020 <T	.	.	.120 <T	.040 <T
DEC	.060 <T	BDL	.	.	BDL	BDL
CADMIUM (UG/L)						
			DET'M LIMIT = 0.050		GUIDELINE = 5.000 (A1)	
JAN	BDL	BDL	BDL	BDL	BDL	.060 <T
FEB	.100 <T	BDL	.180 <T	BDL	BDL	.120 <T
MAR	BDL	BDL	BDL	.070 <T	BDL	BDL
APR	.160 <T	.090 <T	BDL	.060 <T	.160 <T	.070 <T
MAY	.090 <T	.180 <T	BDL	BDL	.080 <T	BDL
JUN	.080 <T	BDL	.060 <T	BDL	.600	BDL
JUL	.090 <T	BDL	BDL	BDL	.	.
AUG	.070 <T	BDL	.070 <T	.100 <T	1.100	.100 <T
SEP	BDL	.	BDL	BDL	.160 <T	BDL
OCT	BDL	BDL	.090 <T	BDL	.190 <T	BDL
NOV	BDL	.110 <T	.	.	.070 <T	BDL
DEC	BDL	BDL	.	.	BDL	BDL
COBALT (UG/L)						
			DET'M LIMIT = 0.020		GUIDELINE = N/A	
JAN	.320 <T	.300 <T	.180 <T	.220 <T	.320 <T	.230 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
FEB	.310 <T	.280 <T	.260 <T	.270 <T	.290 <T	.300 <T
MAR	.030 <T	BDL	BDL	.040 <T	BDL	BDL
APR	BDL	BDL	BDL	BDL	BDL	BDL
MAY	.450 <T	.410 <T	.420 <T	.290 <T	.440 <T	.430 <T
JUN	.030 <T	BDL	.070 <T	.070 <T	BDL	BDL
JUL	.080 <T	.180 <T	.090 <T	.070 <T	.	.
AUG	BDL	BDL	BDL	BDL	BDL	BDL
SEP	BDL	.	BDL	BDL	BDL	BDL
OCT	.100 <T	.240 <T	.100 <T	.100 <T	.090 <T	.080 <T
NOV	BDL	BDL	.	.	.050 <T	BDL
DEC	.200 <T	.090 <T	.	.	.040 <T	.070 <T
CHROMIUM (UG/L)						
				DET'N LIMIT = 0.100	GUIDELINE = 50. (A1)	
JAN	5.600	2.100	2.900	.620 <T	9.200	12.000
FEB	.560 <T	1.900	.220 <T	20.000	12.000	20.000
MAR	12.000	24.000	18.000	18.000	17.000	17.000
APR	.730 <T	1.000 <T	5.900	3.100	7.900	8.900
MAY	19.000	20.000	18.000	17.000	18.000	6.900
JUN	12.000	3.100	9.700	12.000	11.000	8.300
JUL	14.000	7.900	16.000	17.000	.	.
AUG	14.000	9.600	15.000	15.000	15.000	9.800
SEP	20.000	.	17.000	14.000	14.000	5.300
OCT	2.500	1.600	3.500	3.200	4.500	1.100
NOV	2.400	2.400	.	.	3.400	1.800
DEC	4.700 <T	2.600 <T	.	.	5.600	.640 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE		N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		SITE 1			
TYPE										STANDING		FREE FLOW	
COPPER (UG/L)		DET'N LIMIT = .100										GUIDELINE = 1000 (A3)	
JAN	1.500	1.800	1.600	2.000	210.000	42.000							
FEB	1.900	2.100	.800 <T	1.900	330.000	51.000							
MAR	2.100	2.300	1.900	2.100	92.000	33.000							
APR	2.000	2.100	1.000 <T	1.700	250.000	60.000							
MAY	2.200	2.200	1.400	2.300	120.000	38.000							
JUN	2.500	2.400	1.300	2.100	130.000	61.000							
JUL	1.900	2.100	.660 <T	1.200	-	-							
AUG	1.800	1.800	1.300	1.900	180.000	120.000							
SEP	8.100	-	1.000 <T	1.700	160.000	14.000							
OCT	2.000	1.700	1.000 <T	1.600	260.000	72.000							
NOV	1.300	1.800	-	-	270.000	49.000							
DEC	1.800 <T	3.300 <T	-	-	260.000	50.000							
IRON (UG/L)		DET'N LIMIT = 4.000										GUIDELINE = 300. (A3)	
JAN	24.000 <T	21.000 <T	73.000	58.000	61.000	52.000							
FEB	23.000 <T	26.000 <T	63.000	59.000	63.000	57.000							
MAR	28.000 <T	26.000 <T	61.000	51.000	63.000	50.000 <T							
APR	28.000 <T	27.000 <T	55.000	55.000	63.000	56.000							
MAY	19.000 <T	13.000 <T	41.000 <T	43.000 <T	51.000	37.000 <T							
JUN	26.000 <T	27.000 <T	64.000	59.000	140.000	56.000							
JUL	28.000 <T	23.000 <T	73.000	67.000	-	-							
AUG	19.000 <T	18.000 <T	66.000	68.000	27.000 <T	27.000 <T							
SEP	28.000 <T	-	70.000	69.000	BOL	BOL							
OCT	20.000 <T	21.000 <T	55.000	56.000	60.000	50.000 <T							
NOV	34.000 <T	27.000 <T	-	-	160.000	240.000							

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1969

SITE TYPE	SITE 1			STANDING	FREE FLOW
	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	
DEC	23,000 <T	20,000 <T	.	.	190,000
MERCURY (UG/L)					
			GUIDELINE = 1.000 (A1)		
			DET'M LIMIT = 0.010		
JAN	.070	.060	.080	.080	.090
FEB	.080	.080	.070	.	.070
MAR	.060	.080	.080	.060	.060
APR	.030 <T	.030 <T	.030 <T	.030 <T	.090
MAY	.030 <T	.030 <T	.030 <T	.030 <T	.030 <T
JUN	.030 <T	.030 <T	.020 <T	.030 <T	.030 <T
JUL	.040 <T	.040 <T	.030 <T	.040 <T	.
AUG	.020 <T	.020 <T	.020 <T	.020 <T	.060
SEP	.030 <T	.	.020 <T	.030 <T	.030 <T
OCT	.030 <T	.030 <T	.020 <T	.030 <T	.030 <T
NOV	.030 <T	.	.030 <T	.030 <T	.030 <T
DEC	.030 <T	.020 <T	.	.	.040 <T
MANGANESE (UG/L)					
			GUIDELINE = 50.0 (A3)		
			DET'M LIMIT = .050		
JAN	31,000	30,000	36,000	36,000	34,000
FEB	34,000	36,000	43,000	46,000	39,000
MAR	33,000	36,000	37,000	37,000	32,000
APR	36,000	36,000	37,000	37,000	37,000
MAY	32,000	32,000	39,000	39,000	33,000
JUN	33,000	31,000	45,000	45,000	36,000
JUL	33,000	33,000	48,000	48,000	.
AUG	33,000	33,000	49,000	50,000	35,000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
SEP	38,000	-	52,000	52,000	16,000	13,000
OCT	33,000	32,000	46,000	46,000	39,000	35,000
NOV	36,000	37,000	-	-	46,000	54,000
DEC	37,000	36,000	-	-	41,000	49,000
POLYDEMIUM (UG/L)						
		DET'M LIMIT = 0.020		GUIDELINE = N/A		
JAN	.710	.590	.700	.690	.710	.850
FEB	1,000	1,000	1,100	1,100	1,100	1,200
MAR	1,100	.820	1,100	1,100	1,100	.950
APR	.930	.980	.920	.990	.920	.950
MAY	.990	.910	.940	1,200	1,100	1,100
JUN	1,200	1,100	1,000	1,000	1,100	1,100
JUL	.880	1,100	1,000	1,000	-	-
AUG	.890	.890	1,100	1,100	1,100	1,100
SEP	.800	-	.850	.950	.760	.780
OCT	.740	.780	.840	.880	.830	.800
NOV	.800	.690	-	-	.960	1,200
DEC	.620	.600	-	-	.810	.830
NICKEL (UG/L)						
		DET'M LIMIT = 0.100		GUIDELINE = 50. (F3)		
JAN	1,400 <T	1,100 <T	.220 <T	BOL	140,000	.980 <T
FEB	2,100	2,000 <T	.940 <T	2,100	35,000	3,400
MAR	1,000 <T	BOL	BOL	BOL	7,900	2,000 <T
APR	BOL	BOL	BOL	BOL	8,200	6,000
MAY	8,400	9,900	4,000	4,800	13,000	7,900

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	SITE 1			SITE 1	
	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	FREE FLOW
				STANDING	
JUN	2.300	3.000	BOL	BOL	1.800 <T
JUL	2.400	2.100	.320 <T	.980 <T	.
AUG	BOL	BOL	BOL	BOL	BOL
SEP	BOL	.	BOL	BOL	BOL
OCT	BOL	BOL	BOL	BOL	BOL
NOV	BOL	BOL	.	.	BOL
DEC	BOL	BOL	.	.	BOL
LEAD (UG/L)					
				STANDING	
JAN	.050 <T	.060 <T	.520	1.300	.320
FEB	.080 <T	.040 <T	.500	.350	.760
MAR	.150 <T	.230	.500	.750	.460
APR	.250	.310	.410	.470	2.400
MAY	.240	.190 <T	.500	.380	.510
JUN	.270	.050 <T	.520	.560	1.300
JUL	.200 <T	.300	.170 <T	.290	.
AUG	.240	.310	.320	.340	1.800
SEP	.480	.	.130 <T	.130 <T	.780
OCT	.110 <T	.110 <T	.200 <T	.180 <T	.920
NOV	.170 <T	.050 <T	.	.	.700
DEC	.100 <T	.180 <T	.	.	.550
ANTHONY (UG/L)					
				STANDING	
JAN	.310	.290	.250	.310	.190 <T
FEB	.580	.490	.690	.660	.510

GUIDELINE = 50. (A1)

DET'M LIMIT = 0.050

GUIDELINE = 146. (D4)

DET'M LIMIT = .050

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
MAR	.480	.520	.530	.540	.520	.530
APR	.640	.610	.430	.410	.670	.550
MAY	.650	.450	.620	.610	.750	.540
JUN	.590	.560	.600	.580	.640	.630
JUL	.550	.510	.610	.530	-	-
AUG	.590	.600	.560	.530	.640	.510
SEP	.460	-	.460	.450	.430	.360
OCT	.350	.370	.380	.230	.390	.320
NOV	.300	.170 <T	-	-	.250	.300
DEC	.400 <T	.240 <T	-	-	.370 <T	.300 <T
DELENIUM (UG/L)						
			DET'M LIMIT = 0.200		GUIDELINE = 10. (A1)	
JAN	.330 <T	1.500 <T	.370 <T	.680 <T	2.000 <T	1.600 <T
FEB	.360 <T	2.400 <T	2.400 <T	1.800 <T	2.300 <T	4.400 <T
MAR	2.900 <T	4.700 <T	4.900 <T	5.300 <T	4.100 <T	3.200 <T
APR	BOL	.210 <T	1.700 <T	2.500 <T	3.800 <T	2.800 <T
MAY	1.100 <T	2.800 <T	3.600 <T	2.000 <T	5.800 <T	7.100 <T
JUN	2.100 <T	3.100 <T	2.600 <T	4.300 <T	2.500 <T	3.700 <T
JUL	1.900 <T	2.400 <T	1.500 <T	1.900 <T	-	-
AUG	1.300 <T	1.100 <T	2.100 <T	2.500 <T	3.300 <T	2.800 <T
SEP	BOL	-	1.100 <T	BOL	BOL	1.700 <T
OCT	BOL	BOL	BOL	BOL	BOL	BOL
NOV	1.100 <T	BOL	-	-	1.300 <T	1.500 <T
DEC	BOL	BOL	-	-	BOL	BOL
STRONTIUM (UG/L)						
			DET'M LIMIT = .050		GUIDELINE = N/A	

TABLE 5
DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
JAN	1800.000	1800.000	1800.000	1700.000	1700.000	1800.000
FEB	2100.000	2000.000	2000.000	2200.000	2200.000	2200.000
MAR	2000.000	2300.000	2000.000	2000.000	2000.000	2000.000
APR	2200.000	2200.000	2000.000	2000.000	2100.000	2100.000
MAY	2000.000	2100.000	1800.000	1800.000	1900.000	1900.000
JUN	2400.000	2300.000	2100.000	2200.000	2200.000	2200.000
JUL	2300.000	2200.000	2100.000	2100.000	2300.000	2200.000
AUG	2300.000	2300.000	2300.000	2300.000	2300.000	2200.000
SEP	2600.000	2100.000	2100.000	2200.000	2300.000	2200.000
OCT	2100.000	2100.000	2000.000	2000.000	2000.000	2000.000
NOV	2300.000	2300.000	2000.000	2000.000	3200.000	3400.000
DEC	2100.000	2200.000	2000.000	2000.000	3000.000	2900.000
TITANIUM (UG/L)						
			DET'N LIMIT = .050		GUIDELINE = N/A	
JAN	14.000	14.000	16.000	15.000	16.000	17.000
FEB	16.000	17.000	14.000	16.000	16.000	16.000
MAR	14.000	26.000	15.000	15.000	14.000	16.000
APR	11.000	11.000	17.000	18.000	10.000	11.000
MAY	16.000	17.000	17.000	17.000	17.000	19.000
JUN	25.000	24.000	25.000	24.000	25.000	25.000
JUL	13.000	13.000	14.000	14.000	25.000	25.000
AUG	18.000	19.000	27.000	28.000	28.000	27.000
SEP	14.000	15.000	14.000	13.000	14.000	14.000
OCT	15.000	15.000	16.000	17.000	18.000	17.000
NOV	9.900	9.700	16.000	17.000	14.000	16.000
DEC	12.000	13.000	16.000	17.000	13.000	14.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
THALLIUM (UG/L)						
DET'N LIMIT = .010 GUIDELINE = 13. (04)						
JAN	.020 <T	BOL	BOL	BOL	BOL	.030 <T
FEB	.130 <T	.170 <T	.090 <T	.080 <T	.060 <T	.130 <T
MAR	.050 <T	.040 <T	BOL	BOL	BOL	BOL
APR	.090 <T	.160 <T	.060 <T	BOL	.080 <T	.070 <T
MAY	.030 <T	.140 <T	BOL	.040 <T	.030 <T	BOL
JUN	.090 <T	.070 <T	BOL	BOL	.020 <T	.020 <T
JUL	.070 <T	.090 <T	BOL	BOL	.	.
AUG	.040 <T	.020 <T	.040 <T	.020 <T	BOL	.060 <T
SEP	BOL	.	BOL	BOL	BOL	BOL
OCT	.040 <T	.030 <T	.020 <T	BOL	BOL	BOL
NOV	.090 <T	.080 <T	.	.	.030 <T	.100 <T
DEC	BOL	BOL	.	.	BOL	BOL
URANIUM (UG/L)						
DET'N LIMIT = .020 GUIDELINE = 100. (81)						
JAN	1.100	.990	.680	.700	.650	.880
FEB	1.200	1.200	1.300	1.300	1.100	1.200
MAR	1.000	1.000	.870	.840	.910	.830
APR	.990	.950	.850	.870	.770	.830
MAY	.950	1.100	.840	.830	.840	.880
JUN	1.100	.960	.910	.910	.980	.820
JUL	1.100	1.200	.940	.920	.	.
AUG	1.100	1.000	.850	.890	.810	.820
SEP	.890	.	.590	.550	.740	.720
OCT	.790	.880	.660	.640	.700	.700
NOV	.980	.810	.	.	.940	1.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
DEC	.840	.830	-	-	.910	.850
VARIATION (UG/L)						
		DET'D LIMIT = .050		GUIDELINE = N/A		
JAN	.390 <T	.350 <T	.240 <T	.250 <T	.270 <T	.280 <T
FEB	.320 <T	.390 <T	.230 <T	.290 <T	.290 <T	.290 <T
MAR	.330 <T	.310 <T	.150 <T	.130 <T	.160 <T	.140 <T
APR	.310 <T	.330 <T	.120 <T	.150 <T	.190 <T	.190 <T
MAY	.460 <T	.550	.310 <T	.410 <T	.440 <T	.330 <T
JUN	.340 <T	.340 <T	.170 <T	.140 <T	.270 <T	.160 <T
JUL	.420 <T	.370 <T	.240 <T	.310 <T	-	-
AUG	.320 <T	.330 <T	.330 <T	.350 <T	.390 <T	.340 <T
SEP	.490 <T	-	.330 <T	.390 <T	.530	.570
OCT	.310 <T	.270 <T	.160 <T	.150 <T	.190 <T	.170 <T
NOV	.400 <T	.310 <T	-	-	.340 <T	.420 <T
DEC	.290 <T	.340 <T	-	-	.160 <T	.200 <T
ZINC (UG/L)						
		DET'D LIMIT = .001		GUIDELINE = 5000. (A3)		
JAN	10.000	10.000	5.200	5.700	39.000	7.500
FEB	10.000	9.500	4.800	4.900	52.000	5.900
MAR	9.600	8.100	5.100	5.600	14.000	5.300
APR	8.500	9.100	3.500	3.300	19.000	9.800
MAY	12.000	12.000	7.800	7.400	13.000	7.100
JUN	12.000	12.000	7.100	6.700	15.000	15.000
JUL	9.600	10.000	4.800	4.500	-	-
AUG	9.200	9.100	3.600	3.500	40.000	7.300

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW
SEP	8.300	-	2.800	3.400	33.000	4.800
OCT	8.800	9.300	8.200	7.600	43.000	7.000
NOV	8.200	8.300	-	-	80.000	10.000
DEC	8.700	13.000	-	-	36.000	9.600

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1969

SITE TYPE	PESTICIDES & PCB				STANDING	FREE FLOW
	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED		
ALPHA BHC (MG/L)	DET'N LIMIT = 1.000				GUIDELINE = 700 (G)	
JAN	BDL	BDL	BDL	BDL	•	BDL
FEB	BDL	BDL	BDL	BDL	•	BDL
MAR	BDL	BDL	BDL	BDL	•	BDL
APR	BDL	BDL	BDL	BDL	•	2.000 <T
MAY	BDL	BDL	BDL	BDL	•	BDL
JUN	BDL	BDL	BDL	BDL	•	BDL
JUL	BDL	BDL	BDL	BDL	•	•
AUG	BDL	BDL	BDL	BDL	•	BDL
SEP	BDL	BDL	BDL	BDL	•	BDL
OCT	BDL	BDL	BDL	BDL	•	BDL
NOV	BDL	BDL	BDL	BDL	•	BDL
DEC	BDL	BDL	BDL	BDL	•	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
					STANDING	FREE FLOW

PHENOLICS						
PHENOLICS (UG/L)						
DET'N LIMIT = 0.2						
GUIDELINE = 2.00 (A3)						
JAN	.600 <T	BDL	1.000	.600 <T	.	.
FEB	.600	.600 <T	1.600	.600	.	.
MAR	BDL	BDL	BDL	.600 <T	.	.
APR	.600 <T	BDL	.600 <T	.400 <T	.	.
MAY	.800 <T	1.200	1.600	1.200	.	.
JUN	1.000 <T	BDL	1.200	.400 <T	.	.
JUL	.800 <T	.800 <T	1.200	.600 <T	.	.
AUG	.600 <T	1.000	1.400	1.000 <T	.	.
SEP	3.000	.	3.200	1.000 <T	.	.
OCT	.600 <T	.400 <T	1.600	.600 <T	.	.
NOV	.400 <T	BDL	.	.	.	.
DEC	BDL	BDL	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		STANDING	FREE FLOW
VOLATILES										
TOLUENE (UG/L)				DET'M LIMIT = .050		GUIDELINE = 24.0 (84)				
JAN	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
FEB	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.050 <T
MAR	.050 <T	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
APR	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.100 <T
MAY	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
JUN	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
JUL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.
AUG	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.050 <T
SEP	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
OCT	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
NOV	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
DEC	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
ETHYLBENZENE (UG/L)										
				DET'M LIMIT = .050		GUIDELINE = 2.4 (84)				
JAN	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
FEB	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.050 <T
MAR	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
APR	.050 <T	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.050 <T
MAY	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
JUN	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
JUL	.050 <T	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	.
AUG	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
SEP	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL
OCT	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	.	NDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELMIRA WELL SUPPLY 1989

SITE		N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	SITE 1	
TYPE						STANDING	FREE FLOW

NOV	BOL	BOL	BOL	.	.	.	BOL
DEC	BOL	BOL	BOL	.	.	.	BOL

N-XYLENE (UG/L)		DET'N LIMIT = .100 GUIDELINE = 300 (84)					
JAN	BOL	BOL	BOL	BOL	BOL	.	BOL
FEB	BOL	BOL	BOL	BOL	BOL	.	BOL
MAR	BOL	BOL	BOL	BOL	BOL	.	BOL
APR	BOL	BOL	BOL	BOL	BOL	.	BOL
MAY	BOL	BOL	BOL	BOL	BOL	.	BOL
JUN	BOL	BOL	BOL	BOL	BOL	.	BOL
JUL	BOL	BOL	BOL	BOL	BOL	.	BOL
AUG	BOL	BOL	BOL	BOL	BOL	.	BOL
SEP	BOL	BOL	BOL	BOL	BOL	.	BOL
OCT	BOL	BOL	BOL	BOL	BOL	.	BOL
NOV	BOL	BOL	BOL	BOL	BOL	.	BOL
DEC	BOL	BOL	BOL	.	.	.	BOL

O-XYLENE (UG/L)		DET'N LIMIT = .050 GUIDELINE = 300 (84)					
JAN	BOL	BOL	BOL	BOL	BOL	.	BOL
FEB	BOL	BOL	BOL	BOL	BOL	.	BOL
MAR	BOL	BOL	BOL	BOL	BOL	.	BOL
APR	BOL	BOL	BOL	BOL	BOL	.	BOL
MAY	BOL	BOL	BOL	BOL	BOL	.	BOL
JUN	BOL	BOL	BOL	BOL	BOL	.	BOL
JUL	BOL	BOL	BOL	BOL	BOL	.	BOL

.050 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELNITRA WELL SUPPLY 1969

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
AUG	BOL	BOL	BOL	BOL	-	BOL
SEP	BOL	-	BOL	BOL	-	BOL
OCT	BOL	BOL	BOL	BOL	-	BOL
NOV	BOL	-	-	-	-	BOL
DEC	BOL	BOL	-	-	-	BOL
STYRENE (UG/L)						
						GUIDELINE = 46.5 (D2)
JAN	.150 <T	BOL	.150 <T	BOL	-	BOL
FEB	.250 <T	BOL	.350 <T	BOL	-	BOL
MAR	.200 <T	BOL	.250 <T	BOL	-	BOL
APR	.500 <T	BOL	.250 <T	BOL	-	BOL
MAY	BOL	BOL	BOL	BOL	-	BOL
JUN	.200 <T	BOL	.150 <T	BOL	-	BOL
JUL	.200 <T	.100 <T	.150 <T	BOL	-	.100 <T
AUG	.100 <T	.050 <T	.100 <T	BOL	-	BOL
SEP	.100 <T	-	.100 <T	BOL	-	BOL
OCT	BOL	BOL	BOL	BOL	-	BOL
NOV	.150 <T	.050 <T	-	-	-	.100 <T
DEC	.100 <T	BOL	-	-	-	.050 <T
CHLOROPHOM (UG/L)						
						GUIDELINE = 350 (A1+)
JAN	BOL	7.500	BOL	1.300	-	1.100
FEB	BOL	4.900	BOL	1.300	-	1.200
MAR	BOL	6.000	BOL	BOL	-	1.200
APR	BOL	7.700	BOL	.900 <T	-	1.100

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELNIRA WELL SUPPLY 1999

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		STANDING	FREE FLOW
111, TRICHLOROETHANE (UG/L)										
										GUIDELINE = 200 (D1)
MAY	BOL	6.500	BOL	1.400	.	1.500				
JUN	BOL	7.100	BOL	2.000	.	.900 <T				
JUL	BOL	2.700	BOL	1.500	.	.				
AUG	BOL	2.000	BOL	1.200	.	BOL				
SEP	BOL	.	BOL	.900 <T	.	BOL				
OCT	BOL	1.300	BOL	1.100	.	1.000				
NOV	BOL	3.400	.	.	.	1.300				
DEC	BOL	6.600	.	.	.	1.100				
111, TRICHLOROETHANE (UG/L)										
										GUIDELINE = 200 (D1)
JAN	BOL	BOL	BOL	BOL	.	BOL				
FEB	BOL	BOL	BOL	.100 <T	.	.200 <T				
MAR	BOL	BOL	BOL	BOL	.	.000 <T				
APR	.020 <T	BOL	.020 <T	BOL	.	.200 <T				
MAY	BOL	BOL	BOL	.120 <T	.	.160 <T				
JUN	BOL	BOL	BOL	.020 <T	.	BOL				
JUL	BOL	BOL	BOL	BOL	.	.				
AUG	BOL	BOL	BOL	BOL	.	BOL				
SEP	BOL	.	BOL	BOL	.	.100 <T				
OCT	BOL	BOL	BOL	BOL	.	BOL				
NOV	BOL	BOL	BOL	.	.	.040 <T				
DEC	BOL	BOL	BOL	.	.	BOL				
DICHLOROBIPHENYLENE (UG/L)										
										GUIDELINE = 350 (A1+)
JAN	BOL	5.700	BOL	3.550	.	2.250				

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELIIRA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW	N AQUIFER TREATED	S AQUIFER RAW	S AQUIFER TREATED	STANDING	FREE FLOW
FEB	BOL	4.700	BOL	3.150	-	2.900
MAR	BOL	5.300	BOL	.050 <1	-	2.750
APR	BOL	4.250	BOL	2.350	-	2.850
MAY	BOL	4.900	BOL	3.000	-	3.150
JUN	BOL	5.200	BOL	3.800	-	1.850
JUL	BOL	3.300	BOL	3.350	-	BOL
AUG	BOL	2.600	BOL	2.800	-	BOL
SEP	BOL	-	BOL	1.800	-	1.350
OCT	BOL	1.250	BOL	2.400	-	1.250
NOV	BOL	3.000	-	-	-	1.000
DEC	BOL	5.550	-	-	-	-
CHLORIDE/BROMIDE/THIAME (UG/L)						
		DET'N LIMIT = .100	GUIDELINE = 350 (AT+)			
JAN	BOL	3.500	BOL	5.700	-	4.200
FEB	BOL	3.000	BOL	4.600	-	4.100
MAR	BOL	3.100	BOL	BOL	-	4.100
APR	BOL	1.800	BOL	4.500	-	5.500
MAY	BOL	3.300	BOL	4.900	-	5.300
JUN	BOL	3.300	BOL	5.300	-	3.200
JUL	BOL	2.900	BOL	5.200	-	-
AUG	BOL	2.300	BOL	5.000	-	BOL
SEP	BOL	-	BOL	3.700	-	BOL
OCT	BOL	1.300	BOL	3.600	-	2.500
NOV	BOL	2.100	-	-	-	1.200
DEC	BOL	2.600	-	-	-	1.100

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELUMIDA WELL SUPPLY 1989

SITE TYPE	N AQUIFER RAW		N AQUIFER TREATED		S AQUIFER RAW		S AQUIFER TREATED		STANDING	FREE FLOW
BROMOPORN (UG/L)										
DET'N LIMIT = .200										
GUIDELINE = 350 (A1+)										
JAN	NAL	.600 <T	NAL	2.800	.	2.600				
FEB	NAL	.600 <T	NAL	2.000 <T	.	1.800 <T				
MAR	NAL	.800 <T	NAL	NAL	.	2.400				
APR	NAL	1.000 <T	NAL	2.200	.	2.600				
MAY	NAL	.600 <T	NAL	1.800 <T	.	2.000 <T				
JUN	NAL	.600 <T	NAL	2.000	.	2.000 <T				
JUL	NAL	.800 <T	NAL	2.400	.	2.000 <T				
AUG	NAL	.600 <T	NAL	2.600	.	NAL				
SEP	NAL	.	NAL	3.600	.	NAL				
OCT	NAL	.600 <T	NAL	2.600	.	2.000 <T				
NOV	NAL	.600 <T	.	.	.	.400 <T				
DEC	NAL	.600 <T	.	.	.	.400 <T				
TOTL TRICHALOMETHANES (UG/L)										
DET'N LIMIT = .500										
GUIDELINE = 350 (A1)										
JAN	NAL	17.300	NAL	13.350	.	10.150				
FEB	NAL	13.200	NAL	11.050	.	10.000				
MAR	NAL	15.200	NAL	NAL	.	10.450				
APR	NAL	16.750	NAL	9.950	.	12.050				
MAY	NAL	15.300	NAL	11.100	.	11.950				
JUN	NAL	16.200	NAL	13.100	.	7.950				
JUL	NAL	9.700	NAL	12.450	.	.				
AUG	NAL	7.500	NAL	11.600	.	NAL				
SEP	NAL	.	NAL	10.000	.	NAL				
OCT	NAL	4.450 <T	NAL	9.700	.	6.850				
NOV	NAL	9.100	.	.	.	4.150 <T				

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM ELURINA WELL SUPPLY 1989

SITE TYPE	N ADJUSTER RAW	N ADJUSTER TREATED	S ADJUSTER RAW	S ADJUSTER TREATED	SITE 1	
					STANDING	FREE FLOW
DEC	ML	15,500	.	.	.	3,550 <T

TRACE LEVELS OF TOLUENE AND LABORATORY ARTIFACTS DERIVED FROM THE ANALYTICAL METHODOLOGY.

TRACE LEVELS OF STYRENE ARE CONSIDERED TO BE LABORATORY ARTIFACTS RESULTING FROM THE LABORATORY SHIPPING CONTAINERS.

Table 6

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
FECAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	0 (A1)
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML (A1)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL (A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	MG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	MG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	MG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	MG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	MG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	MG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	MG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	MG/L	1.0	10. (C1)
HEXACHLOROETHANE	MG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	MG/L	1.000	N/A
PENTACHLOROBENZENE	MG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	MG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	MG/L	5.000	N/A
2,6,8-TRICHLOROTOLUENE	MG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	MG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	MG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	MG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	MG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	MG/L	50.	2000. (B4)
PENTACHLOROPHENOL	MG/L	50.	30000. (B4)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMS/LESS	N/A	6.5-8.5 (A4)
FIELD TEMPERATURE	°C	N/A	<15 °C (A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500 (A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20 (A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.8	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100 (A4)
MAGNESIUM	MG/L	.05	30. (F2)

SCAN/PARAMETER	UNIT	DETECTION	
		LIMIT	GUIDELINE
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL FJELDAHL	MG/L	.02	N/A
PH	DMSHLESS	N/A	6.5-8.5 (A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40 (F2)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)

METALS

ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	10. (F3)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)

PHENOLICS

PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
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PESTICIDES & PCB

ALDRIN	MG/L	1.0	700. (A1)
AMETRINE	MG/L	50.	300000. (D3)
ATRAZINE	MG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	MG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	MG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE (LINDANE)	MG/L	1.0	4000. (A1)
ALPHA CHLORDANE	MG/L	2.0	7000. (A1)
GAMMA CHLORDANE	MG/L	2.0	7000. (A1)
BLADIX	MG/L	100.	10000. (B3)
DIELDRIN	MG/L	2.0	700. (A1)
METHOXYCHLOR	MG/L	5.0	900000. (B1)
ENDOSULFAN 1 (THIODAN I)	MG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	MG/L	4.0	74000. (D4)
ENDRIN	MG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE (THIODAN SULPHATE)	MG/L	4.0	N/A
HEPTACHLOR EPOXIDE	MG/L	1.0	3000. (A1)

SCAN/PARAMETER	DETECTION		
	UNIT	LIMIT	GUIDELINE
HEPTACHLOR	NG/L	1.0	3000. (A1)
METOLACHLOR	NG/L	500.	50000. (B3)
MIREX	NG/L	5.0	N/A
OXYCHLORDANE	NG/L	2.0	N/A
O,P-DDT	NG/L	5.0	30000. (A1)
PCB	NG/L	20.0	3000. (A2)
O,P-DDD	NG/L	5.0	N/A
PPDDE	NG/L	1.0	30000. (A1)
PPDDT	NG/L	5.0	30000. (A1)
ATRATONE	NG/L	50.	N/A
ALACHLOR	NG/L	500.	35000. (D2)
PROMETONE	NG/L	50.	52500. (D3)
PROPAZINE	NG/L	50.	16000. (D2)
PROMETRYNE	NG/L	50.	1000. (B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000. (B2)
SIMAZINE	NG/L	50.	10000. (B3)

POLYAROMATIC HYDROCARBONS

PHENANTHRENE	NG/L	10.0	N/A
ANTHRACENE	NG/L	1.0	N/A
FLUORANTHENE	NG/L	20.0	42000. (D4)
PYRENE	NG/L	20.0	N/A
BENZO(A)ANTHRACENE	NG/L	20.0	N/A
CHRYSENE	NG/L	50.0	N/A
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A
BENZO(E)PYRENE	NG/L	50.0	N/A
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A
PERYLENE	NG/L	10.0	N/A
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A
BENZO(A)PYRENE	NG/L	5.0	10. (B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A
BENZO(B)CHRYSENE	NG/L	2.0	N/A
CORONENE	NG/L	10.0	N/A

SPECIFIC PESTICIDES

TOLAPHENE	NG/L	N/A	5000. (A1)
2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T)	NG/L	50.	200000. (B4)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000. (A1)
2,4-DICHLOROPHEMOXYBUTYRIC ACID	NG/L	200.	18000. (B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A
DICAMBA	NG/L	100.	120000. (B1)
FICLORAM	NG/L	100.	190000. (B3)
SILVEX (2,4,5-TP)	NG/L	50.	10000. (A1)
DIAZINON	NG/L	20.	20000. (B1)
DICHLOROVOS	NG/L	20.	N/A
DUREBAN	NG/L	20.	N/A
ETHION	NG/L	20.	35000. (G)
GUTHION (AZINPHOSMETHYL)	NG/L	N/A	20000. (B1)
HALATHION	NG/L	20.	190000. (B1)
NEVINPHOS	NG/L	20.	N/A
METHYL PARATHION	NG/L	50.	7000. (A1)
METHYLTRITHION	NG/L	20.	N/A
PARATHION	NG/L	20.	50000. (B1)

SCAN/PARAMETER	DETECTION		GUIDELINE
	UNIT	LIMIT	
PHORATE (THIMET)	NG/L	20.	2000. (B3)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENONYL	NG/L	N/A	N/A
BUX (METALKANATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	90000. (B1)
CICP (CHLOROPROPHAM)	NG/L	2000.	350000. (C)
DIALATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	90000. (B1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)
VOLATILES			
BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHYLENE DIBROMIDE	UG/L	.05	.05 (G)
METHYLENE CHLORIDE	UG/L	.500	50. (B1)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	70. (D5)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (B1)
1,2-DICHLOROPROPANE	UG/L	.050	6.0 (D5)
TRICHLOROETHYLENE	UG/L	.100	50. (B1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60 (D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17 (D4)
CHLOROBENZENE	UG/L	.100	60. (D5)
1,4-DICHLOROBENZENE	UG/L	.100	1.0 (B4)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	3.0 (B4)
TRIFLUOROCHELOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	140. (D5)